



John Jackson

MF

| HARVARD UNIVERSITY HERBARIUM.
C36

THE GIFT OF

LIBRARY OF THE GRAY HERBARIUM
HARVARD UNIVERSITY

Ernest Watson

Apr 13/03 +

FERNY COMBES.



Vincent Brock, Lith.

Entrance to Clovelly.

FERNY COMBES.

A RAMBLE AFTER FERNS IN THE GLENS
AND VALLEYS OF DEVONSHIRE.

BY

CHARLOTTE CHANTER.

Rose Kinney

“Nature is silent to the unobservant man; and that rich spring of enjoyment escapes him, which has power to delight and cheer us, even when suffering from the severest blows of fate.”—*Meyen’s Geography of Plants*.

LONDON :

LOVELL REEVE, HENRIETTA STREET, COVENT GARDEN.

1856.

TO THE
REV. CHARLES KINGSLEY
AND
MRS. KINGSLEY

This Little Book is affectionately Dedicated

AS A SMALL TOKEN OF THE GRATITUDE

DUE TO THEM

FOR AWAKENING AND FOSTERING IN THEIR CHILDREN

A LOVE OF NATURE AND BEAUTY,

BY THEIR DAUGHTER,

CHARLOTTE CHANTER.

P R E F A C E.

THE publication of this little book has arisen out of a desire to share with others the happiness which I have enjoyed amid the wild scenes of Devonshire, hoping that they too may derive fresh life and joy from the breezy heaths and moorlands of their native country. I write for the votaries of health and pleasure, not for votaries of Science. I write for those of less cultivated intellect, who, with an innate taste and love for all that is beautiful and divine in nature, too often wander in darkness where even a little knowledge would open to them worlds of light in the animal and vegetable kingdoms, provided not only for use, but for endless interest and research into the works of their Creator. My humble effort is designed to lead the youthful and to cheer the weary spirit, by leading them, with a woman's hand, to the Ferny Combes and Dells of Devon, where my best reward will be their innocent amusement or their restoration to health under the soothing influences of a rambling Tour.

C. C.

Ilfracombe, July, 1856.

LIST OF PLATES.

PLATE	.....	faces	Title
I	.....	
1	Entrance to Clovelly.		
PLATE	II.	.....	p. 12
1	Adiantum Capillus Veneris.		
2	Blechnum Spicant.		
PLATE	III.	.....	p. 26
1	Asplenium lanceolatum.		
2	Asplenium Adiantum-nigrum.		
3	Asplenium septentrionale.		
PLATE	IV.	.....	p. 40
1	Osmunda regalis.		
2	Hymenophyllum unilaterale.		
PLATE	V.	.....	p. 56
1	Allosorus crispus.		
2	Polystichum angulare.		
PLATE	VI.	.....	p. 72
1	Cystopteris fragilis.		
2	Asplenium marinum.		
PLATE	VII.	.....	p. 88
1	Polypodium Dryopteris.		
2	Polypodium Phegopteris.		
PLATE	VIII.	.....	p. 100
1	Lastrea Oreopteris.		

FERNY COMBES.

CHAPTER I.

ON my very first page I must disclaim any intention of attempting to supersede those scientific and necessary works already published on the Study of Ferns. My object is merely to give a short account of those that may be found in Devon, in such a manner as may render them readily recognized by the novice in botany, and to describe some few of the beauties of the beautiful districts of the West.

Mr. Gosse, in his 'Naturalist's Rambles on the Devonshire Coast,' has called attention to many of its charms and wonders, both scenic and marine. He has done a good deed, as every one does who presents new objects of interest and research to those who, living habitually in romantic scenes, forget to notice them, and, surrounded by many of

the most marvellous of God's creations, know neither their habits nor their nature. Some indeed may inquire, "What is the advantage of knowing the names of a set of weeds which are of no use to any one?"

"Of no use?" That is a question not for us to solve. At any rate, are many of your employments more useful? Are all so innocent?

Ask the worn-out, heart-wearied man yonder, who has escaped for one short month from his stool in a city office; ask him, if there be not a use in the exquisite and various forms and colours of the seaweeds he is turning over on the beach. He will answer, "It does me good to look at them; it refreshes my soul; it makes me young again!"

Of no use? That is too easily assumed, and implies surely a forgetfulness of Him that made them. It does not necessarily follow that a thing is useless because we happen to be ignorant of its use. We ought to believe, we ought to be sure, that the lowliest flower or insect has, though it may be unknown to us, a real use in God's economy. "Behold the lilies of the field, how they grow!" These gaily-dressed flowers had their use. It was their mission (could they have a higher?) to become preachers unto men, of reliance on God for meat, drink, and clothing.

Who will deny the fascination which flowers of the choicer kinds exercise over all. But to how few are they accessible! The costly greenhouse, the highly-paid gardener, are requisite for their possession; but what do the wild flowers cost? Only the trouble of picking them; and they, if people take the pains of looking for and examining them, have quite as many, though more humble, charms than their more aristocratic relations.

“Here! smell this bunch of Butterfly Orchis. Did ever a greenhouse produce a flower with more exquisite scent?”

“But where did you find it? I never saw it before.”

“Good friend, I plucked it by the side of a road you have passed a hundred times. Look at these daffodils!—where will you find colour more brilliant, texture more delicate?”

“But they are such vulgar flowers; they are so common!”

“My friend, I fear you are very vulgar, for men and women are very common on the earth.”

Among the many pursuits that people follow nowadays, for instruction as well as mere amusement, few have arisen in so short a space of time or deserve more attention than the study of that mysterious class of plants known as Ferns, which

are, as most people are aware, a flowerless tribe, bearing, with one or two exceptions, their fructification at the back of their leaves, in brown masses, sometimes round, sometimes oblong.

Here I would give a hint to young botanists, never to name a fern unless it is seeded, as many leaves of flowering plants greatly resemble some ferns in their outline and cutting. I have known more than one instance of persons fancying themselves possessed of a rare fern, when in fact they had but the leaf of the common weed.

Unlike general botany, which gives comparatively little pleasure after the flower is named, from the difficulty of preserving the colour of the specimens, the study of ferns not only leads the collector into the most picturesque scenery and wildest haunts of nature, but by the winter fireside, or in the close rooms of our crowded cities, he has but to open his "Fern-book" and the forms of his favourites appear before him as green and graceful as when they hung by the mountain torrent or waved in some quiet shady lane, bringing back to remembrance pleasant summer rambles amid lovely scenes, making the heart swell with gladness at the recollection of the forms of beauty and purity on which he has been permitted to gaze.

Some ferns are only to be found in certain situa-

tions. *Allosorus crispus*, the Parsley Fern, so called from its resemblance to parsley, is found only on lofty hills, and people are apt to confine their search for it to the north of England and Wales, because those are the habitats generally given. Botanists however have not yet looked everywhere; there are still many untrodden corners, and, we feel certain, many an unthought-of treasure yet to be discovered. This fern was found a few years ago on Exmoor, not far from Challacombe. We have hunted for it three or four times, but without success. In our search for the Parsley Fern we stumbled on *Polypodium Phegopteris*, the Beech Fern, for which that locality was never before given. Now *P. Phegopteris* has often in its company the delicate Oak Fern. *P. Dryopteris*, so we searched further, and to our great delight found abundance of *Phegopteris* and the pretty *Dryopteris* (which until that day was supposed to be absent from Devon and the adjoining counties) intermixed with it.

In the same glen we lighted on a few fine plants of *Polystichum lobatum*, and two of the Lycopodiums (provincially known by the name of "Good luck"), *clavatum* and *Selago*. Moreover we had the pleasure of seeing two ring-ousels, or mountain blackbirds, in their native haunts, and their strange call, as they whirled around us, or seated

on a stone watched our movements, added to the wildness of the scene. *Lastrea rigida* is believed to grow only on limestone, *Asplenium viride* to be confined to lofty positions, *Woodsia* to the highest mountains and most inaccessible cliffs, *Lastrea Thelypteris* is the inhabitant of marshes, *Lastrea cristata* of bogs; yet remember there is many a bog, many a marsh, many a cliff, that has never been really well searched, and you may chance to stumble on a variety where least expected. To tell the exact spots where each plant grows would be depriving you of one of the greatest pleasures and interests of the pursuit, namely discovery for yourself. If you take a tour through Devonshire, and use your eyes as you travel, you will hardly fail to find most of the ferns I shall describe to you; but it is no exercise of observation to walk straight to a given point, pluck a leaf, and walk back again; no, a fern collector, if he really wish to make discoveries, must be ever on the alert, ever watching; even on a wall you have passed a hundred times without observing anything curious, the hundred and first time you may find a treasure you did not think was within fifty miles of you.

CHAPTER II.

“THE Holidays!” Ah! what delight has that word given us in days gone by! What delight it gives now, to that bright-eyed mischievous urchin, who never knows his lessons, and to that pale-faced girl who dreams of the kindly gentleness of home relations, and of unrestrained liberty of action!

“The Holidays!” How the head of the family brightens up at the words, after his nine or ten months’ daily toil! How are the maps brought out, guide-books consulted, and ‘Bradshaw’ thumbed till nearly useless, before it is settled *where* they shall go. One of the party suggests a place, and five minutes after another in a completely opposite direction. Sister Alice wants to go to Switzerland, but there is no sea-bathing there; Madge suggests the Lakes, but there it is always rainy; Frederick wishes to go to Scotland, but that is too expensive.

At last a gentle voice from a corner suggests “Beautiful Devonshire.”

“But Devonshire! mother dearest!” exclaim the trio, “what is there to be seen in Devonshire?”

“I don’t know exactly,” answers the quiet voice, “but I have heard it is very beautiful; you know there is Lynton and Lynmouth,” and there the mother’s knowledge of Devonshire scenery begins and ends.

However the voice in the corner has it its own way; and the party start for the wilds of the West, after expending sundry sums of money on brown hats, camp stools, sketch books and pencils, not forgetting a tin botanizing case and a quire or two of botanical drying paper, for the father is something of a botanist and “means to take it up a little this summer.”

Do you know what it is to love the country thoroughly? To rejoice in Nature’s wildest, grandest scenes, and yet to have your lot cast either in a town where you see nought but smoke and houses, or in a country where all around nothing meets the eye but low fens, peaty dykes, and alder bushes, save, where far away, the dim outline of a great cathedral rises against the sky, man’s substitute for mountains? If you love the country, then you know the intense delight it is to catch a view of distant hills. At first they are but a purple line on the horizon; then as one approaches they gra-

dually rise until we make out the tower of some village church, and then a stately mansion with its ancient trees around, and the little cottage homes nestling hard by !

Just so the hills of the West appear to us as we rush towards them on the railway, which we leave at Bridgewater and take the road which runs through Minehead to Lynton.

Now we have passed Coleridge's Nether Stowey and Southeby's "Kilve by the green sea," which shines in the sun away to our right, with the hills of Wales beyond. After crossing the beautiful Quantock Hills we see in front of us the country for which we are bound. There rises Dunster Castle, and behind it the brown rolling mass of Exmoor looms up against the sky.

This is decidedly the best entrance into Devonshire, and it is much to be regretted that it is not better known and more frequented. The whole route from Bridgewater is rich in lovely scenes ; and the first impression of the Great Western County will be one of astonishment, as from "The County Gate" the traveller looks down on Glenthorne, the marvellous residence of Mr. Halliday, and is told, that to reach the house he sees just beneath him requires a winding road three miles long. Such are Devonshire hills !

Passing on over four or five miles of moorland road, Exmoor stretching away as far as the eye can see, here and there a glen with its brawling stream abounding in trout, and its hanging woods where the red deer love to lie, you come to the cliff church of Countisbury, where, turning to the right, you reach the terraced road overhanging the sea, which leads down to Lynmouth.

Lynmouth is a most charming place: the inn is charming; kindly Miss Jones who keeps the inn is charming; the man who catches fish for your dinner is charming; and the dinner itself, after a day of rambling, toiling, broiling in the Linton sun, is more appreciated than twenty dinners in the dusty smoky town.

CHAPTER III.

THE grounds belonging to Sir William Herries are undoubtedly the gem of Lynmouth, though it is hardly right to draw comparisons where all is so lovely. The valley of the East Lynn, with Watersmeet embowered in trees, may have more charms for some, than the narrower and steeper glen of the West Lynn ; both have interest for the botanist.

At Sir W. Herries' the ferns, though superb, are of course untouchable ; but in the wild beyond, the moss-like Filmy Fern grows in quantities, and the turf is chequered by the ivy-leaved *Campanula*, one of the most exquisite and delicate of our wild flowers. In either valley the sweet-scented *Lastrea Oreopteris* attains an unrivalled luxuriance, as does also *Lastrea Filix-mas paleacea*.

A pleasant pedestrian expedition may be made over Exmoor by any one who can rough it a little, and knows a bog when he sees it ; for there are bogs on Exmoor that a man would not willingly put

his foot in ; one in particular, known as “ Mole’s Chamber,” bears a bad character.

Tradition tells us that at the close of a dark and foggy day, when even the most familiar objects become vague and deceptive, a farmer, who had been visiting his friends, determined to make a short cut to his home by a track with which he was well acquainted, and which on a bright summer day might be travelled easily enough. His friends tried to persuade him “ that the longest way round was the shortest way home,” that already the mist was thick upon the moor, and that before he could get far on the road night would have closed in.

But Farmer Mole was obstinate ; “ he knew the way, he had travelled it a hundred times ; and even if he lost his way his good horse would find it again.” So the wilful man departed, and this was the last time Farmer Mole was seen. His wife waited in vain. The next day he was searched for, but without success. There were marks of his horse’s hoofs to the edge of the bog, but no trace beyond. Some tell that his hat was found lying on the surface ; but however that may be, he is believed to have perished in the bog, which is called Mole’s Chamber to this day.

Some enlarge the tale, and say how, on moonlight nights, the belated traveller sees flitting over



Vincent Brooks Lth.
1 Adiantum Capillus Veneris. 2 Blechnum Spicant.

the brown sward a ghostly farmer on a ghostly horse.

The first point to be gained is Simonsbath. The road thither, after passing the immediate vicinity of Lynmouth, is a track over the wild, rolling moor, which stretches for miles on every side, dreary and brown. At Simonsbath there has been opened, quite recently, a very humble inn, which, though small and miserable, is better than nothing, since one is no longer obliged to bait one's horse by the roadside, as we have often done.

Mr. Knight, who first enclosed "The Forest," as it is still called (though the trees are few and far between), began to build a house at this spot, but it was never finished, and is now a ruin.

From Simonsbath the wayfarer may follow the course of the river Barle (there is no road this way) down to Landacre Bridge,—a desolate scene, but one which a person who loves solitude will thoroughly appreciate. To the angler the stream affords more substantial charms ; and if he is wise he will not fail to entrap a few trout, as an addition to his evening meal at the wayside hostelry at Withypool, for moor fare is not always the most abundant. From Landacre bridge the right-hand bank of the stream should be taken ; and, unless for the desperate fisherman, who can wade, and

rather prefers water to dry land, it is better to keep along the heights for a mile or so.

Withypool is a place that looks as if it had fallen by accident into its present position, and as if the houses had never recovered their fright, but stood staring at one another, wondering what would happen next. They are dotted about, without the faintest semblance of regularity, each with a large turf-stack and a swarm of children and geese, while in every direction shaggy ponies, and still more shaggy colts, are to be seen.

The church looks gloomy and uncared for; parsonage there is none; and the only house of any size is the 'Royal Oak,' the new hotel. However lowly its pretensions, it is a palace compared with its predecessor. Now the 'Royal Oak' boasts of a parlour as well as a good-sized kitchen, and upstairs are four or five rooms; so that Withypool must be gay indeed if a bed cannot be obtained there, though it must be confessed it will prove none of the softest.

The scenery below this place is very striking, as you make your way by the banks of the river. In parts there is a footpath, but you have occasionally to force your way through thick underwood and between gigantic trees, sometimes wading the river or crossing it by a narrow plank-bridge, choosing

the side that seems most promising. Now and then you pass under farms picturesquely perched on the heights overhanging the Barle, while all around fine trees and moist upland meadows delight the eye. The resemblance between this valley and several of the valleys running up from the Rhine is very decided; indeed, all through this part of Somersetshire, as well as in parts of Devon, one is incessantly reminded of the much vaunted scenes of Rhineland, and hugs oneself in the belief that if people only knew our native beauties they would be as much admired as their foreign counterparts. But *the* sight of this part of the world is yet to be described. About four or five miles below Withypool the valley widens, while the hills rise in height, on one side bare and stony, on the other delightfully wooded. From this spot the windings of the river can be seen for some distance. In the foreground is the Barle, shallow, but broad: here there is a ferry, a road descending one hillside, running through the stream, and ascending the opposite bank. There is a bridge too; and this bridge is well worth a visit, either to the antiquary or the lover of the ancient and curious. It is an old British structure, though popular superstition gives it a far more mysterious and diabolical origin: it is considerably longer than any bridges of similar con-

struction we have seen on Dartmoor, to which district they have been supposed to be confined. If my memory serve me right, there are not less than twelve or fourteen upright slabs rising out of the river, like so many piers ; as many flat stones rest on them, forming a path broad enough for three people to walk abreast. The name of this curious piece of architecture is “Tor’s Steps.” I am inclined to spell it Thor’s Steps ; for sure some ancient hero, in bygone days, must have raised and poised those vast blocks. The first time I visited the Steps there occurred one of the most awful storms of thunder and lightning I ever experienced. The rain descended in torrents, the thunder growled and echoed through the hills, while the forked lightning flashed, seeming to strike the turf close to our feet. Thor, the Thunder God, appeared disputing our right to invade his territories, wishing to punish us for our boldness by hurling some of his bolts at our devoted head.

From Tor’s Steps two routes may be followed, and it depends on the time at command to say which shall be chosen.

The longest is by Dulverton, a pleasant country town, built in a basin at the junction of the Barle and the Exe, surrounded by wooded hills. The road from thence to Dunster is extremely pretty ;

and if the stranger has not already been there, it is well worth his while to go out of his road a few miles to pay it a visit, and he may find his way back to Lynton through Porlock. The other way is to cross the hills from Tor's Steps to Winsford, where he will find the most perfect little inn, both externally and internally, that can be imagined, situated in the woody valley of the Exe ; a place where he will be tempted to remain, and which he will long remember with pleasure.

The road from Winsford to Exford (our next point) is no bad specimen of a Devonshire, or, to speak more correctly in this case, Somersetshire lane. It is only just wide enough for a small carriage : turning is an impossibility ; and if two vehicles were to meet, I know nothing for it but for them to remain *vis-à-vis* for ever and a day. In some places you could not even get out, unless you scrambled over the back of the horse or the back of the carriage.

From Exford there is a road that leads to the top of Porlock Hill, the most dreaded bit of road in all the west country. The hunter after the beautiful should descend to the village of Porlock, pass by Lord Lovelace's myrtle eyrie to Culbone, and on by the cliffs to Glenthorne. Any amount of fatigue will be amply repaid by a succession of

grand and lovely scenes, not easily surpassed. The blue sea shining in the summer sun, dotted with sails ; the snowy seabirds skimming through the clear air ; the green woods gay with flowers, and the busy hum of countless insects, transport the traveller with delight. From Glenthorne (near which place *Asplenium septentrionale** grows) there is a track across the moor (where you may find *Lycopodium alpinum*), leading down to Oare, another of the numberless valleys of this country. By following the windings of the stream some little way, and then turning to the left, Brendon and Watersmeet will be passed, and Lynmouth gained by the valley of the East Lynn.

Oare Water and Badgery Water are well worthy a separate excursion, either to the angler, the botanist, or the artist. For the first there are trout ; for the second, plants ; for the third, some choice bits of rocky stream scenery, set in purple moorlands. For all three there is a chance of coming upon some antlered king of the forest and his velvet-coated dames, whose principal resort are the woods round Brendon Barton, an isolated grange, standing on the edge of the moor, in the direct road from Lynton to Simonsbath. Here, at early dawn or late in the evening, may often be seen a group of these aboriginal inhabitants.

* Plate III. Fig. 3.

Brendon is a favourite meet for the North Devon stag-hounds, and in some years Lynton is a great gathering-place for redcoats.

On one occasion when we were staying at Lynmouth, a deer, roused somewhere on the moor, took the Lynton road. We had just succeeded in gaining the top of that noble cliff on which the summer-house stands, when we heard the cry of the hounds, and soon espied the well-known array of huntsmen glancing between the trees.

The gallant stag, pursued by hounds and hunters, rushed along the road: just at the steepest part some carts and horses stopped the way: on the left was an upright rock: behind, the hounds; the stag bounded over the wall to the right, but found no footing. It is a sheer precipice to the stream; over and over he rolled till he reached the bed of the river; then the chase was over, for the noble beast was dead.

Another story is told of a stag hard pressed, who took to the sea and swam some distance out; he was pursued by a boat and brought back again, a rope fastened round his antlers. On reaching shore (how the weary captive must have rejoiced!) he was dismissed free to his native wilds.

CHAPTER IV.

THE coast of North Devon, from Lynton to Morwinstowe (the first parish in Cornwall), is about seventy miles long; and perhaps in no part of England, of like extent, will you find so many romantic scenes, or such treasures for the artist and botanist.

Beginning with Lynton; its glens!—what more glorious? Its roaring rivers foaming over huge rocks! Its thundering waterfalls! Its shady, mossy woods, and graceful ferns!

The wondrous Valley of Rocks, as its name implies, is strewn with large grey blocks of stone, now piled in fantastic masses, now rising in picturesque crags. A path winds through the centre of the valley, leading past the small bays of Lea and Woodabay, from which place by following the cliffs the pedestrian may arrive at Heddon's Mouth, where great masses of stone shut in the land, shut out the sea, leaving only room for the rushing stream and narrow path to pass through.

The valley is wild in the extreme. The mixture of grey rocks, fine trees, turf, moist meadows where the grass grows tall and green, and the rocky murmuring stream, overhung by trees and fringed by luxuriant ferns dipping into the water, is a sight not lightly to be passed by or easily to be forgotten.

This Vale of Trentishoe well deserves to have a long summer day devoted to it: it should be descended from the bridge to the sea,—a rough walk, for the road is strewn with grey stone similar to those which in places entirely cover the hillside,—and ascended by the road that runs by the side of the stream, as far as the Parsonage. This road, at certain seasons of the year, is the haunt of innumerable butterflies of the larger and handsomer sorts; and among the stones that lie thick under the oak-trees, the Orpine, or Livelong, a large red *Sedum*, grows in great profusion. In the charcoal clearings in the forests of Germany this plant abounds, but it is not common in England. The Orpine makes a pretty garden plant, in which bees take especial delight; and from its peculiarity of keeping alive a very long time out of the ground, is not a bad thing to take as a reminiscence of this lovely spot.

From the Parsonage to the cliffs a narrow turf-

path has been cut along the side of the hills, affording at every turn bewitching views: it should on no account be neglected; but the part between the church and the sea is not a pleasant walk for any one, unless blessed with a steady foot and strong nerves. On horseback it is folly to attempt this lower part, though before now we have ridden some distance along it in fear and trembling, particularly when it became necessary to turn our horses, which there was barely room to do, while one false step would have sent us rolling down a stony precipice.

Passing through Trentishoe we reach a wild expanse of heath, where the large trailing *Lycopodium clavatum* grows, and ascend the highest elevation in this part of the world, Trentishoe Barrow, 1187 feet sheer from the sea, which shines far below, looking smooth and motionless from this height, while the shadows of the cliffs throw the shore into a mysterious shade. In front is Hangman, another bold hill, but somewhat less elevated. Your road leads over its summit; but in order to reach it you must pick your way through the bogs and rivulets of the wild glen of Shercombe, where you will find the bog pimpernel and other marsh flowers.

The view from Hangman is superb, embracing the craggy peak of Little Hangman, the long vale

of Combmarten, and the bay studded with faery islands and indented by faery inlets.

Descending into the valley, across fields and through narrow water-lanes, we pass through part of the straggling dirty street of Combmarten, which looks best at a distance; and ascending a precipitous hill leave the road, turning to the right into a footpath that meanders along the cliff. Here there is many an enchanting view. At length we reach Watermouth, standing at the end of a lovely valley which runs up by Berrynarbor, the tower of the church rising above the trees to our left. Close by are mysterious caves and arches, through which exquisite peeps are to be gained looking back towards Combmarten and the Hangman. Here the Madrepore still dwells, while round about, its fossilized brethren of ancient days star the pebbles that the tide plays with on the shore.

On! on! on! Never satisfied with the beauties near at hand, ever looking afar, we leave the cove of Watermouth, a small lake, as it looks when the tide is in, and emerge again on the turf-y cliffs. We pass by Hele, where the wild balm grows; away to our left is the ferny dell of Chamber Combe, with the haunted gabled house in the foreground; and come at last to Ilfracombe, where on a grey rock the chapel of St. Nicholas, now a

lighthouse, stands, guarding the landlocked harbour. Hillsborough rises on one side, with the remains of an ancient camp, looking down on the town ; further on are the Seven Tors with their rugged tops, and the vast mass of Langleigh Cleve, rising high behind them, shuts in the view.

I cannot attempt to describe a town where steam-boats, coaches, and vans do congregate, and where "parties," mounted on scraggy donkeys (looking as if they were allowed a straw *per diem*), meet you at every turn.

Ilfracombe is a pretty place,—“a nice place,” an agreeable place, a gay place, for it has a delightful public walk, terraced along the rocks, where a band plays twice a day, and folks walk up and down admiring the scenery and themselves ; to say nothing of the *soirées* and public balls.

Besides these attractions, there are the tunnels cut through the hills to reach the beach, which would otherwise be inaccessible, except at low water.

Here, one day last summer, we counted no less than thirty-five of those novel brown mushrooms, who have for the last two years infested the sea-coast, all seated together so close you could not have passed between them : besides sundry other specimens, in groups of half-a-dozen, some perched upon the rocks, some sketching, some making holes

in muslin, others again diving into "rock pools" after unfortunate anemones, which, when touched, spouted out the water they had been leisurely imbibing, and drew in their pretty tentacles as rude hands detached them from their beloved rocks to be deposited in tumblers, there to be examined, tormented, and finally cast out lifeless and decayed.

But let us away to more lonely scenes over the Tors, from whence the sea looks like some vast continental plain, and the ships like towns dotted here and there over its surface ; across the lovely valley of Lee, along by pebbly Rockham, rich in many coloured stones, till we come to the Morte, or "Stone of Death," whose jagged sharks' teeth peep from the foaming sea ready to fasten on any luckless vessel that may venture within the magic circle.

Now passing the shelly cove of Barracane, we reach the magnificent sands of Woolacombe, full two miles long, a pleasant place for a gallop in bright smooth weather, but a sad, sad spot, when winter gales strew the strand with the remains of wrecked vessels and the mangled bodies of luckless sailors. At the further end of the sands is the black headland of Baggy, jutting far into the sea, the abode of countless wild-fowl, into whose nests we look as we wind along the giddy height above,

while the dusky cormorant flaps by, with out-stretched neck, like a bird of ill omen.

Then after a mile or two we come to more sands ; such sands !—miles and miles of bright yellow sand, blown into hills, hollowed out into valleys ; here a lake, there a desert, with not a blade of grass to break the even surface. All around strange birds, strange insects, strange flowers ; while all that disturbs the hush is the roar of the breakers on the ocean bar, far, far away ; and all that breaks the blue of the summer sky, the bright-eyed hawk, poised on motionless wing, watching the rabbits as they play hide-and-seek among their burrows.

Beyond the estuary of the Taw and the Torridge, whose united waters flow into the sea near Appledore, the cliffs begin to rise again, till at Buckish, Clovelly, and Hartland, they reach the height of mountains rising abruptly from the shore.

Ah ! how the coast and sea alter as you pass Hartland Point ! No gentle wavelets ripple over the sand ; but sturdy Atlantic billows rolling in from the far west, come bounding over the stony strand, and leap high into the air as they strike against the projecting masses of rock ! Wild, glorious, and unknown is that part of Devonshire. Few have ever penetrated there, or know anything of the beauties of Milford, Welcomb, and



©自然博物馆

1. *Asplenium lanceolatum* 2. *A. septentrionale*

3. *A. nidus*

Marsland; a large district without inhabitants, except in a few scattered hamlets.

Here especially the Ferns, undisturbed by the busy ploughman or covetous collector, flourish and abound. *Osmunda** higher than your head, *Asplenium marinum*† hanging down to the beach a foot and a half long, and many other treasures, reward the fern hunter.

* Plate IV. Fig. 1.

† Plate VI. Fig. 2.

CHAPTER V.

CLOVELLY! thou most difficult place to describe! How, where, am I to begin? Some think they have seen all that is to be seen, have done thy beauties justice, when they have slipped down, and toiled up, thy steep stair-like street.*

But those who know Clovelly well, will say, See all, see everything; in your journey through the world you will seldom find a place more worth seeing or more deserving a place in your memory.

The most striking entrance to Clovelly is undoubtedly along the Hobby, a road terraced in the cliff, winding in and out, through deep wooded glens and over trickling streams; while below the blue sea shines between the branches, and the waves make gentle moan upon a beach you cannot see. At every turn you are enchanted by fresh prospects,—now over the broad bay to the sand-hills of Braunton, and the rocky promontories of Baggy and Morte; now catching glimpses of the

* See Frontispiece, Plate I.

white cottages nestled in woods, the tiny quay built of unhewn pebbles from the shore, and numberless skiffs and fishing-boats with tanned sails, looking ruddy in the sunlight.

As you leave the Hobby, or rather the New road (for it changes its name about a mile from its termination), you come to a most lovely view. Looking eastward, you can trace the road you have just traversed, and the villages of Buckish and Peppercombe suspended against the dark cliffs, gleaming in the evening sun. Now commences the serious matter of descending to the village : a narrow paved lane, with deep red banks on either hand, leads down the hill. After you have walked about a couple of hundred yards, you should turn to your left, where you will find yourself on a pretty terrace, consisting of four or five houses, covered with myrtles and fuchsias ; from this spot you may form some sort of idea of the strange little town ; four hundred feet below is the blue sea, from which the houses rise irregularly at every sort of angle, *hung* against the sides of a deep precipitous glen, crowned by woods.

We proceed, slipping and sliding, till we pause at what is properly the head of "the street." On each side, tiny gardens or quaint terraced balconies project from the ground-floor of the houses ; these

are rendered necessary by the steepness of the ground (which causes one man's floor to be on the level of his neighbour's roof), giving the inhabitants a small level-way in front of their doors.

The sea breaks and shimmers below ; over the bay the yellow sands gleam, and three or four poplars in the foreground cut the picture and add to the singularity of the scene.

As we proceed, broad paved steps render the walking anything but agreeable ; experience proves a short shuffling trot to be the most secure pace. Any one who ventures down Clovelly street must leave his dignity behind him, and get down as best he may, fortunate if he have not a hard tumble or two by the way.

The inn is hardly distinguishable from the neighbouring cottages, except by its sign of the 'New Inn,' new no longer, and a soldier and sailor elevated in front of it, who periodically attack one another in a furious manner with swords, but apparently without doing any material damage ; I at least have known them five-and-twenty years, and, but that their respective red and blue coats are a little dimmed by age, they seem much the same as ever, as they slowly turn one way at one puff of wind, and slowly return at the bidding of another.

The 'New Inn' can boast of clean beds, and if

it chance to be full, there are several miniature lodgings where a person may not only make shift for a night, but be made comfortable for a longer period, with a primitive and loving welcome.

Below the inn the road gets steeper and steeper, and is at last obliged to condescend to a zigzag, to get down at all. In one place a house over-arches the street ; at another, a steep flight of steps leads to a cottage, which is perched like some sea-bird's nest on a ledge of rock just large enough for it to stand on ; while to reach a third you have to dive under a water-shute at the risk of a wetting.

The quay is as rough as the street, being paved with "popple stones" like the town, but the view is most remarkable. Some of the houses are built upon the beach, the sea washing their walls ; they too have quaint balconies, from which the fishing-nets hang in graceful festoons, as they do also along the quay.

Near Freshwater, a small cataract to the east of the town, *Asplenium marinum* is to be found, but stunted and difficult to remove, owing to the hardness of the rock.

There being no possibility of any wheeled vehicle descending Clovelly street, a road has been cut down the cliff, but it is little less steep than the street. At the top of "Quay Hill," as this precipice

is called, is the entrance into the park, called “The Yellaries Gate.” It is necessary to have a guide, who unlocks the numerous gates and doors, and shows you the sights most worth seeing. The walks run along the cliffs, and every now and then superb views are opened through the trees, with seats placed here and there. “The Cabin” is a small rustic summer-house, built among the trees, affording, from its doorway, a sight of one of the loveliest bits of cliff-scenery imaginable. But all is so beautiful, every step revealing some fresh charm, that it is difficult to say what is *most* beautiful; nor is it all alike: at one spot you turn away from the sea, upon a gorse-clad hill, with fine trees at its base and the opposite hill clothed with woods, where the spotted deer browse and wander quietly about, and where, but for the sea-gulls screaming overhead, you might fancy yourselves a hundred miles inland.

At the “Wilderness,” a wild sort of pleasure-ground, you come again in sight of the ocean. Here in one spot you find a grotto hewn out of the rock, and look down at the waves,—such an awful giddy depth beneath that those most accustomed to such scenes recoil from the precipice,—while in front rises a peculiarly smooth and perpendicular cliff, known as Gallantry Bower. Further on is a

cottage, with a verandah in front, from which we see another varied and lovely scene. Opposite are woods clothing a steep hill; on the left two woody glens, with their accompanying brawling brooks, and on the right the rocky sea-beaten shore.

This shore is called "Mouth Mill," from a small mill that stands hard by. The cliffs are strangely marked and veined by the contortions of the strata, and from the beach, among other fine masses of rock, rises the truly magnificent "Black Church Rock," formed of vast blocks of coarse grit-like stone, with two curious irregular arches through which one sees the blue summer sky, contrasting beautifully with the dark pile. At this place we reach the limits of Clovelly; the woods opposite the Wilderness are in Hartland, and there is a path through them by which the pedestrian may reach Hartland Point.

The high-road from Clovelly to Hartland town runs over dreary uplands, where nothing is to be seen but bleak moors, partially reclaimed, stunted bushes on high stone banks, and Lundy Island rising from the sea.

The part of Hartland best known and most often visited is "the Point;" but fine as it looks from a distance, projecting far into the sea, forming the southern termination of the Bristol Channel, it is

scarcely worth the trouble and fatigue necessary to reach it; fine sweeps of coast are to be seen on either hand, but there is nothing peculiarly attractive in the Point itself.

Our quarters for the night must be at Hartland town; and we may make our way thither from the Point by a longer but far prettier road than the ordinary one. Keeping near the cliffs, we come to an old paved road, where the wild *Daphne* grows; crossing two narrow glens with dancing rivulets overshadowed by the stately *Osmunda*, passing two or three old houses, now converted into farms, every now and then getting peeps of rugged rocks and foamy billows, we reach at last, at Black Pool Mill, the broad Abbey Valley, where a good-sized stream well stocked with trout winds through the meadows. The magnificent tower of the parish church rises above the woods, and the grassy Warren slopes upwards from the stream.

Following the valley, we pass the Abbey (a comparatively modern building on the site of the old), under stately trees, by rich meadows, where the hay smells sweetly up the "Vale" for a couple of miles, till we come to the town.

Now let us start for the more unknown part of Hartland. We follow the Vale again, with noble trees on either hand, under which the ferns attain

an immense size, particularly *Lastrea dilatata*.

Before we reach the Abbey, we turn to the left, up a steep hill to the church, which is magnificently placed, and bears witness to the good taste of its founders. An ancient screen, in excellent preservation, is worth particular attention. It is most elaborately carved, the upper part representing grapes and vine-leaves ; it is quite a work of art, and probably beguiled many an hour for the monks of the abbey near by. From the churchyard a stile leads into a broad turf road along the fields, to the quay. A wilder place than this can hardly be found. The quay itself is much the size of that at Clovelly, and built after the same fashion ; but there is but one most dismal-looking house, with stores for the coals, etc., that are landed here. The broken, craggy, black rocks jut out into the sea and break the waves as they come rushing in like wild horses, and all around rise giant cliffs perforated with deep, mysterious caverns, where the *Osmunda* and the Sea Fern hang from their dripping roofs. A scramble over the wet rocks and lines of sand to these caves will enable a person to judge of the stupendous height of the cliffs. By night the scene is most grand and awful.

Passing on, we keep at the edge of the cliffs (which at the back of the quay are no great height)

till we come to a semiconical hill called Catherine's Tor. It rises abruptly from the shore now, but legends say it once presented a sloping side to the sea, similar to its present land side, but that, year by year, it gradually crumbles away. This is proved by the remains of a Roman villa which have been discovered at the very apex of the cone, in a position in which no sane man would at present remain five minutes, and on the side towards the land are still the remains of a zigzag road leading to the summit. This hill is separated from its neighbours by a broad flat piece of turf, across which a wall of immense width and strength stretches: what could have been its use is now difficult to discover, or when built, but tradition points to it as ancient. There used to be a path down the cliff, near Catherine Tor, which enabled you to reach Milford beach; but it is now in so dangerous a condition, one is obliged to follow the bends of the coast till we reach the valley of Milford. Sweet, pleasant spot, with its sparkling merry stream, its gorse-clad hills and flowery turf! Though it is a real combe, it is a considerable height above the sea, as you will discover when you approach the precipice and see, far below you, dozens of donkeys looking like mice, being laden with sand on the beach.

The path is narrow, rough, and steep, and you are obliged to keep out of the way of the donkeys with their wet sacks, as they toil up heavily laden, or are driven down pell-mell (invariably choosing the best and safest part of the road) by wild little urchins who, at a certain corner, leave the animals to their own inventions, and, seating themselves on a large pebble, slide down the smooth face of a sloping rock, which is scored with the slides of preceding generations. The sand, which is used for manure, is only to be obtained at low tide, the beach immediately under the cliff being formed of what are provincially termed “popple stones,” large pebbles about the size of a man’s head; while lower down jagged rocks start up, and between them the bright yellow sands gleam like threads of gold.

Catherine Tor forms the termination of the beach on one hand; on the other, masses of rock thrown together in every variety of position, with the waves surging and boiling around, prevent aught save the seabirds penetrating further. The gem of the place is the waterfall. It is difficult to describe the beauty of this spot: the stream flows over the smooth face of a perpendicular cliff, and then by two lower falls reaches the beach, while all around the cliffs close in, leaving only room for the foamy river.

But we must mount the rugged path again, and

crossing the stream just above the fall, proceed along a grassy glen, where the round-leaved sundew, the bog pimpernel, and the pale Cornish butterwort grow in profusion, and come out upon “the Common,” where the ravens build, and teach their young to fly, and the goats bound away before you, or reaching some place of safety on the cliffs, stand stamping with anger at your intrusion. For two or three miles the road lies over short turf, starred with the centauries; and few who have not travelled this road can fully appreciate beautiful Devon.

The great extent of turf, now so rarely found, the noble cliffs, the wondrously indented and diversified shore, with the blue Atlantic close beneath you, are unrivalled; nor will the lover of beautiful scenery think lightly of the Valley and Mouth of Welcombe or the Glen of Marsland, whose winding stream, filled with small but excellent trout, separates the counties of Devon and Cornwall.

Ah! truly it is all very wild and very lovely, and also very beautiful; and every day spent in that bright clear air, and amid those glorious scenes, does one good mentally and bodily.

CHAPTER VI.

So far I have spoken chiefly of the coast of Devon, whereas my title gives a claim to my readers to hear something about the Combes.

In Somersetshire and Devon “combe” signifies a hollow. What in other countries would be called dell or glen, vale or dale, are here all called “Combes,” whether large or small; each with its rivulet hastening to the sea.

The Combes of North Devon, with one or two exceptions, are rarely above two or three miles long; and if we could take a bird’s-eye view of the country, we should see that the land within three or four miles of the sea is irregularly scored with these glens, the sides of which, when cultivated, prove rich and fertile; but for the most part they are poorly farmed, or still covered with a tangled mass of briar, ferns, and golden gorse. Now and then you find woods, but not of any very great extent.

The Combes are very rich in ferns; but the best places for hunting are the loose stone-banks of the country. Those who are accustomed only to the bare white walls of our oolitic districts will be surprised to hear that they must look on walls for most of our most beautiful and curious ferns. But a North Devon "wall" is a thing by itself. The rotten shaley slates, placed edgeways, are but the outer covering of deep banks; and through this coating spring tasselled *Athyriums*, never-ending varieties of *Scolopendrium*, and numerous forms of *Filix-mas*, not forgetting the many states of *Lastrea dilatata*, ranging from four feet high to an inch and a half.

Of the wild flowers of this district, those most striking belong to the coast. The vernal squill, the sweet-scented ladies'-tresses, and the golden blossoms of the yellowwort, opening only in the sunlight, are to be found near Ilfracombe, as well as the samphire, the sea-lavender, and the beautiful wild balm, a rare plant. Braunton Burrows is rich in curiosities and rarities. Two or three kinds of spurge, the yellow horned poppy, several uncommon poisonous plants, and immense quantities of a very large yellow variety of *Viola tricolor*, but *not*, as has been supposed, the true yellow mountain violet, *Viola lutea*, are to be found there.



Vincent Freda Lith.

1. *Osmunda regalis*

2. *Hymenophyllum unilaterale*

Now let us turn inland, and visit another of the fine districts of Devon.

Out upon the hills ! the glorious, granite-capped hills of Dartmoor, breezy and fresh ! Thousands of acres free from cultivation, for Nature has put her own seal upon them. Ages, ages ago were those huge blocks of granite strewn about, defying man to intrude on Nature's solitude ; for who could remove all those countless myriads of stones, to till the ground that lies beneath ?

Yet centuries ago this wild region, and the wildest parts of it, now deserted by man, were the abodes of a curious, wonderful people. Dartmoor was one of the strongholds of the Druids ; and the many "hut circles," "stone avenues," tolmens, and cromlechs, show them to have been a numerous people, marvellously attached to stones.

Their peculiarly pet place, Wistman's Wood, is unique. Gigantic blocks of granite, so piled one on the other that the only way to get along is to jump from stone to stone. Woe betide you if you put your foot on a nice tempting piece of sedge or grass ! The thin crust speedily gives way, and you may chance to get wedged in between Druidical remains.

From among the rocks spring ancient oaks, known as ancients even in ancient days, gnarled

and stunted, clothed with hoary mosses and parasitical plants.

Not long ago we found numerous rabbit-paths along the branches of the trees. Do naturalists record the fact that rabbits frequent trees; or is it peculiar to those in Wistman's Wood?

Wise people say that Wistman's Wood ought to be "Wise Man's Wood," in honour of the very clever and intellectual people who once resided there. Having a slight knowledge of the Devonshire vernacular, we make so bold as to suggest that "whist" or "wist" signifies sorrowful, mournful. Any one who has visited Wistman's Wood can hardly fail to have been struck with the doleful moans and sighing which assail him on all sides (added to his own if he have a tumble, no unlikely thing), making him fancy that a regiment of Arch-Druids and Bards are bewailing the overthrow of their altars, the desecration of their circles, the standing still of their rocking-stones.

In visiting Dartmoor from North Devon the best route is through Torrington to Oakhampton. The former most beautifully situated on a steep bank overhanging the Torridge; the latter in the pretty valley of the Ockment "Under the Moor."

Oakhampton is a dull, deserted-looking place, but there are many sights in the neighbourhood

which it is considered necessary for those professing to have seen Dartmoor to have visited ; whether they are worth the trouble must depend on the taste of the visitor. Yes Tor, the highest peak in Devonshire, rises, about five miles from the town, to a height of upwards of two thousand feet. The view from the summit is extensive ; the hills of Exmoor away in the north, Rough Tor and Brown Willy in the west, while near at hand the rival hill of Cawsand Beacon and the minor tors and bogs of "the Moor" stretch away for miles ; but the ascent is difficult and toilsome, over huge masses of granite which lie scattered in every direction ; indeed in some places not a blade of grass is to be seen ; it is literally a hill of rocks. Cawsand Beacon and Taw Marsh are also among the sights of this neighbourhood, but are hardly worth a visit from any one who has braved the rocks of Yes Tor, as the view is very much the same, and the bogs far more abundant. But if you really wish to see the moor and do not mind "roughing it," there are two or three out-of-the-way places where you may manage to exist for a day or two. And first, on the high road between Oakhampton and Tavistock we shall find the "Dartmoor Inn." I give you warning that your fare may be nothing more luxurious than eggs and bacon, sparkling beer and

sparkling water ; but it will be served to you on so white a table as perchance your eyes ne'er lighted on, and your snowy sheets will smell refreshingly of mountain peat. Yet, if you follow my suggestion, you will find yourself landed at a little wayside public-house, in the middle of a moor. Never mind ! only accompany me, and you will have a treat you little expect.

We descend the lane opposite the house, passing an old square castle where the Stannary Courts were formerly held, and the notorious Jeffreys sat in judgment : he is supposed to haunt the place still in the form of a black pig. There are numberless pigs hereabouts, white as well as black, all sufficiently ugly to personate Jeffreys or any other unjust judge. Now we stand on Lydford Bridge. We look around with a feeling of disappointment ; we came to see something fine, and do not see it. “ Hush ! do you hear that low murmur ? ”

“ Come, look over the parapet.”

You start back astonished ! giddy !

Far, far, below you, at the bottom o a narrow fissure (not unlike that at Pont-y-Mynach, near Aberystwith), rushes the mountain torrent through its polished slippery bed, hollowed out of the solid rock into innumerable “ punch-bowls,” inaccessible to the most venturous and surefooted.

When you have sufficiently admired this strange place we will go on to Lydford cascade, on another stream about two miles off. After a tedious walk along a road whose high hedges prevent one seeing much of the country, and steering through one of the dirtiest of dirty Devonshire farmyards, we arrive at a mill. The miller's wife is expecting us (she is not the least like Tennyson's Miller's Wife); she is terribly deaf, but has a key which unlocks a gate; and without propitiating her, Lydford woods and Lydford cascade will remain a sealed book to you. If you give her an extra six-pence, she opens the mill-pool, and then leaves you, with the assurance that the water will be down as soon as you.

In our case she was mistaken. Steep as is the path, we are accustomed to those quite as steep; and ere long we were seated by the side of a deep pool below the cascade, which glided over the smooth face of the rock, a small cream-like thread.

We were tired, very warm, and very hungry, and were enjoying our luncheon while the grey-backed trout eyed us suspiciously from their pleasant bath, when there came a soft sound of flowing water, a sighing among the trees, a cool breeze; and, looking up, we exclaimed, "The water is coming!"

On it came ! The slender gliding streamlet swelled into a torrent, leaping and dashing down.

The trout hid under the stones, and we were glad to resume the cloaks we had cast off, and seek a warmer corner away from the spray.

Of the walk we took from Lydford cascade, in search of the picturesque and a shorter way to the Dartmoor Inn, the least said the better ; only we advise any one following in our track to ascend the left-hand river (two unite just below the fall) towards the bridge as far as there is any trace of a path ; but not attempt, as we did, to go further, the consequence of which was that we got into a dense thicket, where in many places we had to scramble on hands and knees, and left sundry parts of our dress sticking in the briars, etc. But oh ! the rocks, the woods, the river, were all worth our pains, scratches, and trouble.

Lydford cascade is very pretty and more celebrated ; but Milford waterfall (near Hartland) is grander. In some respects they resemble each other. Both slide over the smooth face of the rock ; but while at Lydford the water falls as it were *through* trees, at Milford it plunges into a deep pool, surrounded by bare perpendicular cliffs, where the vermillion-spotted trout leap up to the fly of the venturesome angler who has scaled the lower

cliff by clinging to the small projections of the rock in a way which would astonish many an Alpine traveller. Then the stream, after resting awhile, again starts forward between huge masses of rock ; again it falls, and again, till, surging white with foam, it reaches the rocky shore, to be beaten back against the cliffs whence it has fallen, by the wild waves of the Atlantic.

CHAPTER VII.

THE road between Oakhampton and Tavistock runs for many miles along the edge of the Moor. To the left rise stony slopes, crowned with craggy tors, while to the right a rich and beautiful country stretches far away ; the picturesque cone of Brent Tor standing in the midst, and in the distance the wild hills of Cornwall. Three or four miles from the Dartmoor Inn we enter the mining districts and pass close to some extensive works ; then descending a long hill, we reach the valley of the Tavy, and see, about two miles ahead, Tavistock. But it is our intention to get on the Moor ; so, turning to the left by Peter Tavy, we make our way by cross roads to the high-road between Tavistock and the prison, by which we save several miles, an object when one is on a long journey.

After toiling up a hill, which seems as if it never would end,—for as soon as you surmount one height, you see another rising still higher in

front,—you are out on the *real* moor. All around, as far as the eye can reach, nothing but granite, and bogs, and tors.

After travelling some way over a tolerably flat road, we begin to descend again. Close by is Vixen Tor, one of the most beautiful and curious piles of granite on the Moor ; while right and left is the vale of the Walkham, which we cross at Merrivale Bridge. Up another hill, over blocks of granite, once more on the great upland waste, till our horse begins to flag, and we almost despair of ever reaching Princetown. But all of a sudden we find ourselves on a smoother road ; the horse thinks it a good sign, and plucks up a little courage. Presently lights gleam through the darkness, and we make out the mass of buildings near the prison, and passing by the portal and the desolate church with its mournful churchyard, we halt at the door of the Duchy Hotel, a dull-looking granite house, but a place where one can be very comfortable, and which we hail with delight after the prospect of being benighted on the Moor.

Let any one enervated in body and mind, and who longs for pure bracing air and the clearest of water, without paying exorbitantly for them, repair to “the Prisons” or Princetown, as the little hamlet hard by the prison is called. In the last war

the French prisoners were confined here; and now it is an establishment where “penal servitude” is carried out; the prisoners being employed in the quarries, in collecting peat for fuel, and in clearing the ground immediately round the prison of the blocks of granite with which it is encumbered. You may see them at work in gangs, with guards stationed at intervals with loaded muskets ready to fire should any attempt to escape. Several however, in spite of all precautions, have got clear off, aided in more than one instance by the thick fogs that often suddenly envelope the Moor.

This is a desolate region, barren and rocky,—one of the most elevated portions of the great middle plateau of Dartmoor; nothing to be seen but bogs and moorland, strewn with blocks of granite; here and there a Tor, breaking the monotonous outline. But the air, in spite of the mists which often descend on you, is so peculiarly dry and refreshing, that a week at Princetown is a perfect luxury after the moist warm atmosphere of most parts of Devon, which is charming on the whole, but for a continuance very trying to many people.

During a late sojourn at Princetown, we determined to investigate the western side of the Moor. Considering that in all probability we should have to traverse some bad roads, and wishing to try our

horse and springs as little as possible, we left most of our goods and chattels with Mrs. Rowe, at the Duchy Inn ; and following the Plymouth road some miles, turned to the left, and descended into the lovely vale of Meavy by cross roads. The Meavy valley is extremely beautiful ; it winds between the hills to within a mile or so of the prisons ; and in favourable weather, its sparkling brook is no despicable trout-stream. On walls at the upper part we found *Polypodium Phegopteris** in abundance.

Leaving the village of Meavy to the right, we mounted a steep wearisome hill, with a picturesque cottage and an ancient cross standing by the way-side, about half-way up ; then over moorlands where the heather blossomed, and thousands of many-coloured butterflies sported about, till we came to Caddaford Bridge, a singular yet romantic spot, not far from the famed Pixies' Hall, on Sheeptor. Then over more moorland, with beautiful views over Plymouth and its neighbourhood, to the little village of Shaugh Prior.

This is a most remarkable place, built in the midst of rocks. We had intended to bait our horse at the village inn ; the landlord however told us that some church antiquarian parsons occupied his only room whilst their steeds filled the stable ;

* Plate VII. Fig. 2.

that they (the horses, not the parsons,) had eaten his last feed of corn ; and that in short he could render us no further assistance than unharnessing our horse and tying him to a gate.

We reharnessed our half-freed horse, who having calculated on a luncheon was thoroughly disgusted, and proceeded, not knowing where we should rest.

The road would have astonished M'Adam ; indeed all the roads hereabouts are somewhat marvellous. Great projections of granite start up in unexpected positions ; sometimes in front of your horse, who has to exalt his legs in an extraordinary manner to get clear of them, sometimes where the wheels of your carriage would go if they were able. At length, after many meanderings, during which we obtained some magnificent specimens of *Asplenium lanceolatum*,* we reached the bottom of the hill, when to our great joy we beheld a mill. "Surely a mill must contain something farinaceous!" We went in search of the miller, whom after some time we discovered busily engaged cracking nuts. He had some barley-meal and a stable, and was a good-natured fellow, so matters were arranged amid incessant cracking of nuts.

We proceeded on foot up the valley to Shaugh Bridge, just above which the Cad and Meavy join

* Plate III. Fig. 1.

and form the Plym. From the bridge you see on all sides fine old oak-trees, mossy rocks, and dashing waters.

We lean over the bridge to admire the roaring river, when behold, beneath us but out of reach, a magnificent *Polypodium vulgare bifidum* tempts us to risk our necks for its possession. We struggle to gain it, and by the aid of a crooked stick we capture a few fronds; but the finest piece, after having been carefully detached from its holding, totters, falls, into the foaming torrent! O ye River Nymphs, have pity on two enthusiastic fern hunters, and hold their prey until they have time to descend to the bed of your stream! We descend; we leap from rock to rock, the water boiling and surging round. Joy! our treasure is safe, wedged in between a block of stone and the pier of the bridge.

We now tried to force our way up the valley of the Meavy, but a thick underwood soon caused us to relinquish our design and turn towards the valley of the Cad, a glorious place for scenery. The right-hand side is bleak, bare, and grey with granite, the left covered with woods, except in one place, where the Dewerstone rises sheer and abrupt from the bed of the river, a grand and noble object. On the top of this cliff the Dartmoor poet Carrington used

to feed his imagination, and here his name and the date of his death are engraven on the stone. There is a legend connected with this striking object. In deep snowstorms traces have been seen ascending to the highest summit, and on such nights the belated peasant has heard the cry of hound and horn on the fearful crag.

What human huntsman would venture there in the broad daylight, much less when snow-wreaths are confounding hill and valley? Some relate that the unearthly huntsman has been seen, swart as an Indian, tall as a tree, and unsubstantial as a moon-beam, striding from one peak to the other with a hunting spear, and no sooner seen than vanishing in darkness.

In the valley below the Dowerstone flourishes *Hymenophyllum unilaterale*,* *Lastrea dilatata validia*, and another form of *dilatata*, distinguished in the 'Nature Prints' by the name of *fuscipes*. We turn with regret from this lovely spot, and extracting our horse from the miller's stable (this man is certainly King Nutcracker), proceed over Shaugh Bridge up the precipice opposite towards Bickleigh. At the top we pause, and, looking backwards, the view is superb. Bickleigh Vale, with its rich woods, is at our feet; Shaugh Prior church crowning the

* Plate IV. Fig. 2.

hill in front, agreeing so well in sombre colouring with the granite-strewn hill on which it stands ; the Cad rushing down its unrivalled valley ; the vale of Meavy buried in woods, and the grey moor rising above all,—form such a picture as one rarely sees, combining as it does so many contrasts.

Bickleigh ! Here we had determined to stay the night. It was six o'clock when we reached the village, and we had no wish to travel through a strange country in the dark. But we reckoned without our host, or hostess rather, who came to the door and informed us that there was a ploughing-match on the morrow, and that in consequence her house was full. "She was very sorry ; she would have obliged us gladly, but she really could not accommodate us."

"Where can we go then ?" we inquired, having fully made up our minds *not* to go to Plymouth, only a few miles distant. "Oh, at Jump, three miles off, you will be certain to find room," was the reply. We went to Jump ; we entered the inn, were taken for two tramps by the landlady, who had not seen us arrive, beat a hasty retreat, and, in spite of our horse's weariness and our own hunger, started for Tavistock, eight miles off, where, after a pleasant drive by moonlight, and many a laugh at our reception by the landlady of the "Jump

Hotel," we found a good supper, civility, and attention at the Beaufort Arms.

This shows that travelling in Devonshire, if you leave the beaten track, is not always very easy ; from three inns in one day did we turn away unrefreshed. Of course, when we speak of inns, they were only such as an enthusiastic lover of the romantic, an angler, or pedestrian, would condescend to put his head into. "Pride goeth before a fall" is an old proverb; but "Pride destroys a multitude of pleasures" is a true one of modern days, particularly as regards inns, because if you do not occasionally condescend to a humble lodging, some of the most beautiful parts of your own land must remain a *terra incognita*. In foreign countries people frequent inns they would despise in poor old England ; and as to fare, a good dish of eggs and bacon, nice white bread and fresh butter, are certainly preferable to a wretched omelette flavoured with garlic, black bread, and unmentionable butter, which are the staple commodities at country inns on the Continent.

From Tavistock (charming head-quarters, by the bye) we drove next morning to the Morwell Rocks overhanging the Tamar; they rise to a great height out of woods, and are remarkably fine and bold. Unfortunately the opposite bank is disfigured by



Vincent Brooks Lith.

1 *Allosorus crispus*

2 *Polystichum angulare*

mines. This part of the Tamar is decidedly equal to the finest parts of the Wye, and we can but regret that we had not time for a sail up and down this beautiful river of the west.

After leaving the Morwell Rocks, we determined if possible to make our way to a place called the Virtuous Lady Mine ; an odd name for a mine, but said to have been given it in honour of Queen Elizabeth. We were warned that the road was none of the best, being merely a way to the mine ; but we determined to take our chance, being desirous of seeing all that ought to be seen.

It was a long, long hill down, and the road was so full of ruts we were obliged to walk, but we arrived safely at the bottom ; and certainly the place was well worth a visit, particularly "Double Water," where the Tavy and Walkham join. The usual characteristics of Devonshire scenery abound —rocks, woods, rivers, and in the centre a "timbering bridge," and hard by a rock literally clothed with *Asplenium lanceolatum*.* On the bridge was a gate, locked ; and one went to hunt amid wheels and engines for the key, while the other watched the horse and gathered specimens.

After we had passed the mine, the road became worse and worse, but the impossibility of turning

* Plate III. Fig. 1.

compelled us to go on. In many places the ruts were two feet deep ; and if our little carriage had not been of the very lightest description and unburdened with luggage, we never could have got through the mire. At last we emerged on a smooth turf track on the north side of Roborough Down, to our great delight after our adventures in bad roads, which even then were not at an end for that day.

Here, on the open Down, behold a band of cricketers ! “ Let us give them a wide berth ; we should not like to be intruded on ; we won’t bother them.” Fate willed it otherwise ; the road would go straight through them, and nowhere else. We were just whispering, “ What a jolly party ! ” when a shout from one of the players called on us to stop. Then there were pleasant greetings from old acquaintances, and kindly words from new ones, and we went on our way gladdened in heart, thinking how little a few friendly words cost, and how much good they may do, even when spoken at random, as these words were.

We were now in the direct road from Plymouth to Princetown ; but here an unlucky thought occurred to us, suggested by the map authorized by Her Britannic Majesty’s Government. It was early in the day, and there seemed a road carrying us

through two villages, called respectively Walkhampton and Sampford Spiney, and debouching on the road from Tavistock to Princetown, near Merrivale Bridge. Could we not follow this road? So we turned off from the main line, and after many windings and askings reached Walkhampton in safety. Now for Sampford Spiney. "Can we get this way?" we inquired of a farmer, "to Sampford Spiney?"

"Yes, sure; but you'll find it a long way round, and a cruel bad road," was the answer.

We crept on for some distance, and beginning to think we ought to be near our destination, inquired our way of an old woman who sat at the door of her cottage, knitting.

"Stop!" she cries, "I'm hard of hearing; I'll come close. Where b'ye gauen?"

"To Princetown."

"To Princetown! Why, you ought to have turned a long way back."

"We know that; but we came this way to see the country."

"Oh, my dear soul!" she exclaims, in astonishment at the idea; "well sure! so you come this way to see the country! Well, you must go down through the grove, and on and on till you come to a farmhouse, and the folks will direct you. Dear

soul! I would go and show you the way, but I'm deaf, and I can't walk. Good bye, I wish ye well ;" and she held out her hand, and gave ours a hearty shake. Hearty old Druidess, with your grove! there was a kind, warm heart under that wrinkled, rugged form. We drove through "the grove," a dim avenue of ancient trees, to the farm. There was a way, but not for wheels ; so again we thread the grove, and descending by a terrible hill to pretty Ward Bridge, toil up a perfect precipice to Sampford Spiney, a melancholy place, consisting of a church and a house, high, high up in the air, looking down like a sentinel from its altitude on the earth below.

Let us get out of it to the high-road as quick as possible, for the shades of evening are closing round us.

More quickly said than done. We came to a place where two roads diverged; which are we to follow? The map says this one to the right, which will lead us by Vixen Tor to Merrivale Bridge in little more than two miles.

We inquired of a boy, who happened to pass, if we could get that way.

"No," was his answer; "at no time is there a regular road, only a track ; and at present it is so cut up with the peat-carts, your carriage would be

broken to pieces." A man came up and told the same tale. "Anyhow you will have a shocking road; but that way," pointing to her Britannic Majesty's road, "you can't go at all. You must go nearly into Tavistock, eight miles off, before you will get into the Princetown road."

We were obliged to submit. We arrived at a moor where there was no track, only ruts as deep as the axle: in steering clear of them we got among granite blocks; and how we should have managed I know not, had not a man and a cart happened to be going the same road, and directed us; but his horse was fresh and his cart strong, and he went at a good pace, so that it was with no small difficulty that our poor jaded horse kept up with him.

At last we reached Vixen Tor and Merrivale Bridge, but too cross and worn out to heed their charms, abusing the Ordnance map and Sampford Spiney. Never was sight of prison so welcome as that of Princetown was that night to us!

CHAPTER VIII.

THE day came when we were obliged to bid farewell to the invigorating breezes of Princetown ; so, taking leave of the grey Duchy Inn, we started once more on our travels.

About two miles from Princetown is an inn called 'Two Bridges,' much frequented by fishermen. A short distance up the valley, to the left, lies the strange weird Wood of the Wise Men, and to the right the river Dart winds among low hills and swampy meadows. Close by Two Bridges a road branches off to Moreton Hampstead. This is the route usually frequented by those who wish to see the Moor ; but by doing so they lose some of the most striking beauties.

For five or six miles beyond Two Bridges the country is very uninteresting, except when one comes to some rattling, sparkling stream like Cherry Brook, or some Tor as you pass assumes fantastic forms ; but then the scene alters. You

get occasional peeps of the Dart, now considerably swollen by the small streams that have joined it in its way ; then woods make their appearance, looking green and refreshing after the wide expanse of moor one has looked on so long, and presently, at a turn of the road, you see below the junction of the East and West Dart. This spot is truly magnificent : the two rivers, flowing down their respective valleys over their rocky beds, unite below the bridge, and disappear in the windings of a deep glen, surmounted by granite-capped Tors.

From the bridge the views on all sides are superb,—rocks, mountains, vales, woods, rivers, thrown together by the prodigal hand of Nature.

Unfortunately for the lover of the picturesque the road does not continue along the valley, but mounts the hillside to another exposed portion of the Moor. As one slowly ascends amid countless hut circles strewn in every direction, we pause at every half-dozen steps and cast longing lingering looks at the fairy-like place, and wonder we never knew before how surpassingly lovely is our own country.

Devonshire hedges are doubtless very rich in ferns ; but they are anything but agreeable when one wants to see the country. On the borders of the Moor they are higher and thicker than usual ;

and it was with difficulty we could obtain a sight of the fine panorama which, but for the hedges, may be seen from the last hill before we leave the Moor. A gate, or a gap in a fence, gave us occasional opportunities of admiring the windings of the Dart and Webber, the Answell Rocks and Buckland high above them.

We were clear of the hedges at last, on a fine grassy slope, with the Dart at the bottom, the broken pile of Leigh Rocks close by, Holne Chase in front, and right and left the murmuring hurrying stream disappearing among woods.

From Hannaford bridge, which spans the river at this spot, we left the high-road to Ashburton, which crosses Holne Chase, and turned along a road by the riverside through the woods of Spitchweek.

For several miles the drive is beautiful, winding by the rushing Dart, which is fringed with *Osmunda regalis* of great size and in marvellous profusion. There is but one drawback, and that is, that the trees are so crowded that you lose a great many beauties, the river and rocks being in many places hidden from sight.

Ashburton is prettily situated in a soft close valley. There seems little to interest the stranger there ; and though the inn is large and comfortable, and the scent of the magnolias as they peep in at

the windows very delicious, the charges are better suited to long purses than short ones.

From Ashburton we once more turned moorwards, in the direction of Moreton Hampstead. We had investigated Dartmoor on its southern and western sides ; had dwelt for a week in its very centre, and were about to cross its eastern flank by its whole extent. After surmounting a tremendous hill, in our upward course from Ashburton, we found ourselves on an exposed height where the wind came sweeping over the moorland. The air was indescribably delightful after the “muggy” warm atmosphere of the valleys, where the evening before we had been nearly choked by clouds of flies, which covered our clothes and made our grey horse look many shades darker.

After a long drive over the bleak moorland, we came in sight of Hey Tor on our right, whose crags rise majestically above its valley and overlook the low land stretching southward to the sea. From whatever direction you approach these rocks they are most striking objects, and are seen for miles around.

We here made a *détour* to the left, the object of which was to get a view of the most remote village in the district, “Widdecombe in the Moor.” We were quite unprepared for the rich and lovely valley that lay beneath us, an oasis in the surrounding de-

sert. Our position was a very fine Tor, consisting of vast blocks of granite, some the size of an ordinary-sized house, piled one upon another or resting on their edges, looking as if a slight touch would precipitate them into the vale beneath, in whose centre arose the tower of Widdecombe church; while around stood tall trees, and verdant meadows, looking like jewels set in the cold grey moor.

We diverged again from the direct road to visit Beckey Fall, not far from the village of Manaton. The walk from the village over the fields is pretty; but as for a fall, there was literally none when we were present, only a faint trickling and murmuring behind the rocks, which we scaled in every direction, searching for *Hymenophyllum* and *P. Phegopteris*, but without success. We should indeed think that the Fall of Beckey can be at no time very impressive, and in this case there was no miller's wife at hand, who for sixpence would provide a cascade; though there was a gardener, equally ambitious of sixpences, who would gladly make his wicket-gate the only passage to the Fall.

Moreton Hampstead can hardly be called a town, though it has a market-place and one of the cleanest and most pleasant inns in the country. It stands a little elevated, and the air is proverbially pure and dry. It is a capital place from which to

explore the east side of the moor, and the neighbourhood abounds in interesting places.

One delightful excursion is to Lustleigh Cleve. Making your way through narrow lanes you reach the wild ; and clambering among and over granite blocks to the top of the Cleve, you come to one of those views for which Devon is remarkable. Craggy Tors, sparkling streams, wild upland glens with scattered trees, richly wooded valleys, fruitful fields, nestling hamlets, the towers of village churches, all are there ; and you gaze and gaze, and turn now to one side, now to the other, in search of the most beautiful spots ; but each has its own beauty, and loses nothing by comparison. It is a place in which one longs to linger, and drink in all its charms. It is a place from which one cannot turn without a sigh of regret ; a place that comes back in pleasant dreams of happy hours ; a place one seems to have known somewhere, somehow, long, long ago.

Another excursion is to Fingle's Bridge, on the Teign, about four miles from Morton. The river at this part runs through a deep narrow gorge, and from its intricate windings you see neither entrance nor exit, but are completely shut in by hills. Not far off is a Cromlech, and there are other sights within reach both of Morton and Chagford,

the latter a pretty place situated on a romantic height above the Teign, directly under the Moor, which rises all round in sombre grandeur. Near Chagford are many curious monuments attributed to the Ancient Britons; among others the Grey Wethers, immense circles of stones, which I have somewhere seen described as the remnants of serpent worship, as the fanciful may discover a rude resemblance to that reptile in their irregular outline.

Gidleigh Park, with its brawling river shaded by fine trees, is among the choice spots of this lovely neighbourhood, the favourite resort of fishermen and those who have sufficient taste to admire and enjoy the retired beauties of nature.

This country is rich in botanical treasures; the tasselled *Pteris*, the cleft *Asplenium Trichomanes*, and numerous varieties of *Polypodium vulgare*, as well as some strange Lady Ferns, are to be found hard by.

Now farewell to pleasant Morton, and the grey Moor, and away to far different scenes! The road to Exeter is a very lovely one, terraced for a great distance along the side of a valley, and specially pretty near Dunsford Bridge. But rich and beautiful as the country is, we have left our hearts among the wilds of the Moor, and almost despise the cultivated districts, however lovely.

I should recommend any one who has time and opportunity, to travel from Exeter, through Tiverton, Dulverton, and Dunster, in preference to going by the railway. The road cannot boast any very striking object, but the whole route is characterized by softness and quiet ; and the river Exe, along whose bank the road is cut the greater part of the way, is a pleasant, cheerful companion.

My tour is at an end, for I do not attempt to describe those parts of the South Coast with which I am acquainted, as, instead of “Ferny Combes,” the Combes are studded with smart villas and miles of houses, and therefore do not belong to my province. Nor do I profess to have given an account of all that is to be seen on the route I have traced over Dartmoor (the North of Devon I know thoroughly) ; but, feeling how much our native beauties are neglected, I have tried to draw such a sketch of some of them as may induce others to follow in our steps, and investigate still more fully than we had time to do.

I now proceed to describe more particularly such Ferns as may be found by a tourist in Devonshire, noticing at the same time the species which grow in other counties, in order that this little book may be generally useful.

CHAPTER IX.

SCOLOPENDRIUM.—*Masses of seed in lines, with an indusium.*

SCOLOPENDRIUM VULGARE. *Common Hart's-tongue.*

This fern has broad strap-shaped fronds, with a somewhat scaly stem, and is evergreen. The masses of sori, or seed, are in oblique lines, on each side the large central nerve or midrib, and are covered when young by a thin skin or indusium; as the seeds ripen, the indusium divides in the centre, and the two halves roll back, remaining attached by the length of one side to the frond.

The varieties of this fern are both handsome and numerous. Mr. Moore, in 'The Ferns, Nature-printed,' which he has kindly permitted us to refer to, has named no less than sixty-six, and many of these forms may be met with in Devon.

We have ourselves seen the following :—

S. ramosum, certainly the most beautiful, as it

is the most divided *Scolopendrium*. The *stem* is branched, and each frond is numerously divided, the points of the divisions being crisped and fringed. We have several plants of this variety now in great beauty; on one there is a frond, with the stem four times divided; there are a hundred and twenty subdivisions, and these are again divided and serrated. We have a dried specimen of *S. ramosum*, which is nine inches across, the usual width of the ordinary form being about two.

S. digitatum is divided much in the manner of *ramosum*, but the texture is more stiff and leathery, and the frond is flat, not crisped, nor with reduplications of leaf, as in *ramosum*.

S. multifidum has no divided *stem*, but the points of the frond are more or less divided.

S. marginatum has the edge of the frond double, forming as it were two frills, the under one considerably *short* of the edge of the frond. This under edge or frill is usually lobed, and bears seed both on its under and upper surface; is in short *cased* in seed. This is its highest form; in other cases the under membrane is reduced to a mere line or ridge.

S. superlineatum has a ridge usually running round the whole *upper* surface of the frond. This form too has its variations, none of them common.

S. crenato-lobatum has fronds of the ordinary form, but, as its name implies, the edges are lobed and indented; it has the striking peculiarity, that it bears masses of seed, very frequently quite round, on its upper surface, as well as seeds of the usual form on the under.

S. obtusidentatum has its fronds more or less deeply lobed, the lobes separated from one another, and coarsely but regularly toothed. The apex of the frond is usually *round*, the midrib stopping short about half an inch from the top. It is an extremely pretty variety, and was named by Mr. Moore from plants we had the pleasure of sending him from the neighbourhood of Ilfracombe.

S. crispum.—Fronds having the margin much undulated, so as to lie in folds when pressed; barren.—Marwood.

S. variabile has three or four different-shaped fronds on the same plant. Mr. Moore thus describes it:—“The fronds are either normal, branched, reniform or bi-reniform, abrupt, and often partially or wholly unite two forms on one stipes.” In some plants which we have found, many of the fronds consisted of two reniform lobes, standing so as to give the form of a goblet. We have now had it under cultivation for two years, and so far it has proved constant; we have ob-



1 *Cystopteris fragilis*

2 *Asplenium marinum*.

tained about a dozen plants in the neighbourhood, and are inclined to think it not uncommon.

S. polyschides.—"Fronds linear, deeply and irregularly *crenato-lorate* on the margin." We have found a form *almost* identical with this: it is *never* *marginate*.

S. laciniatum.—"A handsome variety, in which irregular portions of the frond are contracted; these portions having the short distinct teeth or the shallow lobes of the *polyschides* type, while here and there other portions grow out to the normal width, and form blunt, rounded, or oblong projecting lobes, or entire normal spaces of greater length. Sometimes the apex, or the base, or one side only of the frond, is affected." "Scarcely two fronds are alike, but the fronds are nearly always affected."

—*Moore*.

These are the principal varieties that we have found in North Devon; there are several minor ones, but too obscure and untried to be mentioned.

It is exceedingly interesting to search out the diverse forms which this most uncertain species assumes, taking care always to see that all or most of the fronds on a plant are alike. All the varieties are peculiarly handsome under cultivation, and require much less care than many of other ferns.

CETERACH OFFICINARUM. *Scaly Hart's-tongue, or Stone Fern.*

Frond simply scalloped ; masses of sori line-like without indusium, almost hidden by the chaffy brown scales which cover the entire under surface of the frond.

A charming little evergreen plant, seldom more than three or four inches high ; it grows on walls, among others on those of Jerusalem, often in company with the Wall Rue.

BLECHNUM SPICANT. *Hard Fern.*

(Plate II. Fig. 2.)

Fronds of two kinds, barren and fertile ; deeply cleft to the stem, divisions very narrow, particularly so in the fertile fronds ; both barren and fertile dwindling to a mere excrescence at the base. Masses of seed in continuous lines, just inside the edge of the pinnæ or divisions, covered with an indusium the length of the pinnæ ; when mature the whole under surface covered with seed.

A common evergreen fern, growing on exposed heaths and hedgerows. The fertile fronds are rigid and upright, the pinnæ far divided. The barren are rigid in texture, but usually decumbent or lying along the ground.

CHAPTER X.

POLYPODIUM.—*Masses of seed round, without indusium.*

POLYPODIUM VULGARE. *Common Polypody.*

Frond strap-shaped, tapering at the apex, deeply cut down to the stem ; pinnæ not stalked. Root thick and creeping, clinging to the trunks of trees, and inserting itself into the interstices of walls ; at the point where the fronds spring, the root is covered with brown scales. Masses of seed large, round, and when mature bright-yellow.

Var. *acutum* has the points of the pinnæ much drawn out and tapering.

Var. *bifidum* has the points of the pinnæ divided into two or more lobes. This second division is often confined to the lower part of the frond ; this variety is usually rigid and thick in texture.

Var. *interruptum* has its pinnæ irregular, and at times wanting, while the apices of some are twice or thrice forked. Found near Ilfracombe.

Var. *serrulatum* "has the teeth of the lobes or pinnæ minutely serrate" (*Moore*). Found in Devonshire by Mr. Wollaston, and by ourselves at Mortehoe.

Var. *denticulatum* has the edges of the pinnæ sharply and regularly toothed.

Var. *serratum* has the pinnæ deeply notched or toothed.

Var. *crenatum* somewhat resembles *serratum*, but is more deeply and broadly notched, and sometimes lobed.

Var. *semilacerum* has been found at Berry Pomeroy Castle, in South Devon; Mr. Moore thus describes it:—"The fronds are elongate ovate, very beautifully and symmetrically divided: the primary lobes being themselves lobed, and in some instances the lobules again divided or serrated." This variety has been known some years under the name of *Hibernicum*, having been first noticed in Ireland.

Var. *Cambricum*, a still more divided form, was named by Linnæus. It is always barren. The original plant was found in Wales; this is not found in Devon, but being a well-known form, some slight notice was deemed necessary.

POLYPODIUM DRYOPTERIS. *The Oak-Fern, or
Tender Three-branched Polypody.*

(Plate VII. Fig. 1.)

This slender and elegant fern is divided into three branches; the branches are again twice divided. At the point where the three branches unite, there is an enlargement of the stem; and the central branch, when growing, turns backwards, which gives the whole plant a peculiar appearance. The root is creeping, about the thickness of a quill, sending up at intervals tender green fronds, which before they are fully developed resemble three balls suspended; the masses of sori are small, and placed near the edge of the pinnule; the stem is usually three times the length of the frond, and is dark-coloured.

This pretty little plant, being easy of cultivation and small in size, is well suited for a Fern-case. It is not common in Devon; indeed, until found by ourselves, it was positively stated by high authorities to be absent from this county. But two years ago, botanizing among the glens on the Devonshire side of Exmoor, we obtained a few fronds, and on paying a visit to the moor last summer found it abundant, but have not yet seen it in a second locality.

POLYPODIUM PHEGOPTERIS. *The Beech Fern.*

(Plate VII. Fig. 2.)

Fronds, a lengthened triangle; only the lower pair of pinnæ stalked, and turning downwards; upper pinnæ usually opposite, forming a row of Greek crosses, being joined to the stem the whole width of their base; pinnæ deeply cleft; pinnules not stalked. Masses of sori near the edge of the pinnules. Whole plant hoary green; stem pale coloured, scaly, and brittle. Root creeping, the thickness of a quill, furnished with brown hairy fibres; it seems hardly to root in the ground, but to attach itself to the moss and grass amid which it grows.

We have noticed a variety in which the pinnules are regularly notched; this is not attributable to luxuriant growth merely, as the smallest plants are similarly indented; most, if not all the plants on Exmoor are of this variety.

The fanciful might imagine this plant, with its drooping lower pinnæ, to be the figure of a mendicant imploring their charity with outstretched arms. This peculiarity is more noticeable when the plant is growing in its native wilds, than when under cultivation.

P. Phegopteris is abundant in the valley of the Meavey, on Dartmoor.

The other *Polypodiums* which, though found in the British Isles, are as yet unknown in Devon, are, first, *P. alpestre*, which so greatly resembles *Athyrium Filix-fæmina* as to have been for many years mistaken for it, being distinguished by the round masses of seed ; hitherto it is only known as growing in Scotland. Secondly, *P. Robertianum* or *calcareum*, which, as far as our experience goes, is not found in Devon ; it somewhat resembles *P. Dryopteris*, but is erect instead of drooping ; both stem and fronds of a pale green colour, mealy in appearance from minute glands with which the whole plant is covered, giving forth a pleasant scent when the hand is passed over the fronds. *P. Robertianum* flourishes in limestone districts : Cheddar, in Somersetshire, is one of its habitats.

POLYSTICHUM.—*Masses of seed round ; indusium round, attached by its centre.*

POLYSTICHUM ACULEATUM. *Prickly Shield Fern.*

Frond lance-shaped, twice divided ; pinnules joined to the midrib by their base, which is very much narrowed, slightly auricled, that is, enlarged on the side next their midrib ; whole plant rigid and prickly, dark green, two or three feet high ; frond narrowed at the base ; stem clothed with broad chaffy scales.

Var. *lobatum*. Narrow lance-shaped: the first pair of pinnules distinct, considerably larger than the others, and auricled; the others not auricled and decurrent; very rigid and spiny, generally smaller than *aculeatum*.

Var. *lonchitidioides*.—Frond once divided, lax; pinnæ crescent-shaped, occasionally deeply cleft.

P. aculeatum grows sparingly, as far as we have observed, in the north of Devon; we found it near Oakhampton and Tiverton, and at Marwood.

P. lobatum occurs on the elevated parts of Exmoor, and near Barnstaple. *P. lonchitidioides* we found near Ilfracombe.

POLYSTICHUM ANGULARE. *Angular Prickly Shield Fern.* (Plate V. Fig. 2.)

Frond broad lance-shaped, wide at the base; each pinnule with a marked projection on the side nearest the midrib, *distinctly stalked*, serrated; each serrature furnished with a hair soft in texture; pendent.

There are many named varieties of *P. angulare*. Among others, the following are to be found in Devonshire:—

Var. *hastulatum*, a very elegant, light, and feathery variety; the pinnules very narrow, with a strikingly long auricle, and spiny.

Var. *imbricatum*, having pinnules overlapping one another.

Var. *aristatum*, remarkable, as its name imports, for its extremely bristly appearance ; the points of the serratures being armed thickly with hairs.

Var. *biserratum*, having the serratures of the lobes again twice or thrice serrated.

Var. *subtripinnatum*, having the pinnules nearest the stem deeply cut, the lobes being again serrated.

Var. *multifidum*. A multifid variety of *subtripinnatum* ; the point of the frond being many times divided, and spread into a fan.

Var. *tripinnatum*, which resembles the foregoing, but is still more divided, the lobes being stalked.

Var. *proliferum* is a plant found in South Devon by Mr. Wollaston, and described as having extremely narrow pinnules, which are far separated, and again divided into pinnulets, and as bearing bulbils.

We have a form likewise in which the pinnules constantly vary in size, some being reduced to the proportion of a pin's head : this gives the plant a very depauperated appearance. It seems to approach the “*irregulare*” of Moore.

Var. *Lonchitis*, which does not, as far as we know, grow in Devonshire, is the simplest form of

the family. It is stiff in its growth, merely pinnate, serrated and spiny, the pinnæ being crescent-shaped. It delights in mountainous regions. Its English name is the Holly Fern.

CHAPTER XI.

ASPLENIUM.—*Masses of seed in lines; indusium opening along its inner margin.*

The English family of *Aspleniums* consists of nine members. Five are to be found pretty abundantly in Devon.

ASPLENIUM LANCEOLATUM. *Lance-shaped Spleenwort.* (Plate III. Fig. 1.)

Frond, in fine specimens, twice divided, the divisions deeply cleft and serrated; in smaller specimens twice divided; the divisions only serrated. Frond lance-shaped; the lowest pair of pinnae smaller than those above, in some cases dwindling considerably; stem short. Sori placed near the margin of the pinnules, and rarely becoming confluent. Not in perfection till September or October.

Evergreen; the young fronds hairy, flaccid, and difficult to preserve. A variable fern, but the seed

always retaining its submarginal position. The whole plant, owing to the sharp serratures of the lobes, has a spiny appearance. It greatly resembles the more common *Asplenium Adiantum-nigrum*, some forms of which are often mistaken for *lanceolatum*.

This fern, as far as our experience goes, is rare in North Devon: in fact we have never found it except in one or two spots, and there sparingly. In the South, and on Dartmoor, it is very plentiful and luxuriant, springing from the interstices of the loose granite walls, and in one or two places clothing the rocks.

ASPLENIUM ADIANTUM-NIGRUM. *Black Spleenwort.* (Plate III. Fig. 2.)

Frond triangular, twice or thrice divided, sharply serrated, but not spiny; the lower pair of pinnæ longer or the same size as the pair above. Stem usually as long as the leafy part of the frond. Sori placed on either side the midvein of the pinnules near the centre, confluent in mature specimens, when the back of the frond is a bright brown, and all trace of shape in the sori is lost.

A common fern, varying in height from one to sixteen inches, differing greatly in form and cutting. Its thick black stem and shining glossy leaves

are conspicuous during the winter months on the stone walls and hedgerows of Devon.

There are several varieties: *obtusum*, which is usually only twice divided, has the whole frond blunter and broader than the common form; and *attenuatum* (as we have named one for distinction's sake), in which every part is drawn out and elongated, are the most remarkable. The latter is a peculiarly elegant plant, of drooping habit and with very long stems. The contrast between it and the ordinary form, which is rigid, is very striking when you see them growing side by side. Mr. Moore has named this latter variety "var. *intermedium*."

Asplenium acutum is an Irish Fern, and has not hitherto been found in England. It is distinguished by its "deltoid mode of growth, its thin and papery texture, and its acute and linear teeth." Forms of *Adiantum-nigrum* are to be found in Devonshire, approaching it in many respects. Thus, of one found by us at Manaton, and named by Mr. Moore *decompositum*, he writes, that it resembles *acutum* "in the form of its fronds and pinnæ, and even pinnules." We have since found others still more nearly approaching *acutum*, which makes it likely that the Irish form will be some day found by some fortunate collector.

ASPLENIUM MARINUM. *Sea Spleenwort.*

(Plate VI. Fig. 2.)

Frond strap-shaped, once divided; pinnules stalked, irregularly oblong, broadest at the base, swelling out on the upper side, more or less serrated.

Var. *lobatum*; the pinnules have a lobe on the upper side, making the plant almost bipinnate.

The Sea Spleenwort grows in unsurpassed luxuriance in the West of England. It abounds about Ilfracombe and Lee; but the largest that has ever come under our notice was in Hartland parish. On one plant the fronds were eighteen inches long; and the caudex, or root-stem, which was three inches high, measured fifteen inches in circumference. It was of the variety *lobatum*.

This plant grows in shady nooks among the cliffs, attaining the greatest size where some small spring finds its way through the rock. In such a position we found it one lovely summer evening, just as the sun was sinking like a ball of fire into the Atlantic, gilding the craggy cliffs and shining yellow sand with its last rays, a little to the right of Hartland Quay, at the entrance of a large cave, in company with *Osmunda regalis*, within the reach of the spray: a curious position for the latter.

It is a very difficult fern either to preserve in the Herbarium or to cultivate. We once lost the collection of a season by placing a number of its fronds to dry with other plants. Its destructive qualities are to be attributed to the salt or soda with which it abounds, as we have had specimens covered with crystals ; and in damp weather, unless most thoroughly dry, they are sure to be covered with moisture, and in that state spread destruction to all that comes within their reach. Very often they lose all their brilliant green flesh, and become mere white skeletons with the brown seed adhering.

For cultivation they do best in a warm greenhouse, and should be liberally supplied with water. They will not grow in the open air, though only removed a mile from their native cliffs.

ASPLENIUM TRICHOMANES. *Common Maiden-hair.*

Frond once divided ; pinnules stalked, nearly round or irregularly egg-shaped. Stem black and very brittle.

Var. *ramosum* ; point of the frond repeatedly divided.

Var. *lobatum* ; pinnules deeply cleft. This is a very handsome plant, larger and more robust than the ordinary form. We found it on the outskirts

of Dartmoor. Var. *ramosum* grows abundantly in one spot about six miles from Ilfracombe.

In Germany there is a legend attached to a well near which this fern grows most luxuriantly. A lady keeping tryst with her lover, he was suddenly, after the fashion of Germany in those days, transformed into a wolf. The lady fled before him, and in her haste fell over a precipice, her black hair tangling in the bushes as she descended. On the spot where she fell a clear spring welled up, and round about her hair took root. The well is called "The Wolf's Spring ;" and the little custodian of the glen, after telling you the story, hands you a bunch of the "Maiden's Hair."

ASPLENIUM RUTA-MURARIA. *Wall Rue.*

Frond triangular or oblong, twice or thrice divided ; pinnules diamond-shaped. A dwarf fern, rarely exceeding two inches in height, growing in tufts in the chinks of walls.

This may be called the Churchyard Fern, being most commonly found on church and churchyard walls, probably because they are left undisturbed longer than others. The most luxuriant specimen we ever saw was growing *inside* the tower of Morwinstowe church. The ancient church stands on the edge of a lofty cliff, round the base of which



Vincent Brooks Lith.

1. *Polypodium Dryopteris*.

2. *P. Phegopteris*.

the wild waves of the Atlantic surge and roar. The churchyard contains more than one monument to shipwrecked and drowned sailors. One is a boat turned upside down, in which the poor fellows had attempted to escape. Another has the broken oars formed into a rude cross,—a romance in themselves. Round about those sad memorials of those “that go down into the sea in ships” grew this little fern. Yet it is not a melancholy-looking plant, as one sees its tiny bright fronds springing even from the interstices of tombs. No ; it seems to speak of the new life and the resurrection that are to come, when we shall all meet in “the haven where we would be.”

The *Aspleniums* unrecorded in Devon are *A. fontanum*, a small fern greatly resembling young plants of *A. lanceolatum*, but distinguished by its winged rachis ; *A. viride*, which is twin sister to *A. Trichomanes*, differing in its green stem and serrated pinnules ; and *A. septentrionale*,* which is (so to speak) a blade once or twice forked. It might easily be mistaken for a grass, but for the seed. It grows about eight or nine miles from Lynton, towards Porlock.

* Plate III. Fig. 3.

CHAPTER XII.

LASTREA.—*Masses of seed kidney-shaped (that is, nearly circular, with an indentation on one side); indusium attached at the indentation.*

LASTREA THELYPTERIS. *The Marsh Buckler Fern.*

Frond lance-shaped, *broad* at the base, pinnate or once divided; pinnæ deeply cleft. In fertile fronds the edges of the lobes turn back over the seed, which is placed along the margin, giving each lobe a pointed and contracted appearance. The *root* is *creeping*, and the stems smooth and scaleless. The fronds are delicate in texture, and pale green.

This fern is recorded as growing in Devon, but we have never as yet been fortunate enough to find it; as its name indicates, it is the inhabitant of marshes and moist meadow-lands.

LASTREA OREOPTERIS. *The Sweet-scented Mountain Fern.* (Plate VIII.)

Fronds lance-shaped; pinnules dwindling at the

base to a mere leafy excrescence close to the ground, the stem being very short; pinnate or once divided, deeply cleft. Sori placed like beads under the edges of the lobes, which do not turn back over them as in *Thelypteris*. The whole under surface covered with small golden-coloured globules, which, when bruised, produce a faint resinous odour. Stem scaly; scales, when young, of an exquisite silver-colour, afterwards becoming brown.

Few things in nature are more beautiful than a great number of these plants before they are unfolded. The grass seems strewn with silver balls, and as you reluctantly tread on them, and brush by them, the scent is delicious; you may chance to see close by large masses of the golden-headed *Lastrea Filix-mas paleacea*, when the contrast between the silver and golden ferns enhances the beauty of each.

Lastrea Oreopteris is by no means uncommon in Devonshire, but it is very generally mistaken by young botanists for *Filix-mas*, which it greatly resembles when mature; but the marginal seed, and the extreme narrowness of the base, will prove infallible marks by which it may be recognized; when old, it seems to lose its golden globules and its scent with them.

Though called a Mountain Fern—and it certainly

abounds on mountains—it is yet finer in sheltered valleys, where it attains a great size, rivalling the largest forms of *Filix-mas*: on exposed rockwork, or as a pot-plant, it generally dwindleth to a few inches in height.

LASTREA FILIX-MAS. *Male Fern.*

Frond lance-shaped, twice divided; pinnules not stalked, separated one from another, serrated; sori medial, and not reaching to the points of the pinnules; stem pale; scales very light brown.

A common English Fern, but having so many varieties that it is often puzzling to beginners to find out the real *Filix-mas*.

Var. *INCISA*.—*The Incised Male Fern.*—Fronds twice divided; pinnules occasionally stalked, deeply incised and again serrated; of a lax habit, often attaining the height of six feet. Sometimes the lower pinnæ are so much developed and cleft as to tempt the young botanist to class it as a variety of *Lastrea dilatata*, rather than of *Filix-mas*.

A form which seems identical with the var. *di-chotoma* is not uncommon; it is of smaller size than the normal plant; and while the fertile fronds are tolerably regular in form, the barren assume all sort of contortions, usually with double or treble points to the pinnæ.

Var. PALEACEA.—*The Chaffy Male Fern.*—Frond twice divided; pinnules not stalked, overlapping, or at least joining one another; not serrated, except at the points of the pinnule, which are cut off square. The entire stem thickly covered with hair-like scales; at first bright gold-coloured, afterwards dark brown: these scales are a mark by which *L. paleacea* may readily be distinguished from the ordinary *Filix-mas*, which has not many scales, and those light-coloured. *Filix-mas paleacea* is also very rigid. The seeding is similar to the ordinary *mas*, but smaller.

There is a variety of *Filix-mas paleacea* in which the pinnules are lobed and serrated, but not so deeply as *incisa*, from which it differs in its rigid habit and ferruginous scales.

Filix-mas paleacea grows in great quantities both in Wales and Devon. In Wales it forms immense masses on the craggy hillsides, giving them a peculiar colouring before its fronds are fully developed, from the intense yellow of its scales. In Devonshire it is found of like size, but generally in woods.

Var. *paleacea multifida* has the apices of the frond and pinnules, and even the pinnæ, irregularly divided; the whole plant is not similarly affected, many of the fronds, especially the fertile ones, being of the normal form.

Var. *cristata* is also a variety of *paleacea*. It is most beautifully and regularly divided, and crisped both at the apex of the frond and the points of the pinnules. It has been found in the immediate neighbourhood of Ilfracombe, by Robert Mole, gardener to J. Downes, Esq., in whose choice collection of ferns it is now growing.

Vars. *abbreviata* and *pumila* are two dwarf forms of *Filix-mas*, which may both be found in North Devon. We once obtained some curious and extreme forms at Hartland, referable to these dwarf varieties.

We have a form of *Filix-mas* which does not seem to have been observed elsewhere, but which, as far as we can judge, approaches very nearly to one described and figured by Mr. Newman, from a frond in the collection of the Linnæan Society, and called by Mr. Moore *subintegra*. The frond is six inches long, narrow, pinnate; apex very acute, prolonged, and curved downwards; lower pinnæ very short; stipes half an inch long.

Pinnæ blunt, crowded, cleft about halfway down into short lobes; lobes slightly serrated. The sori form two lines on each side of, and *close to*, the midvein. More than two-thirds of the pinnæ have sori, beginning from the bottom; the uppermost pinnæ without seed.

LASTREA RIGIDA. *Rigid Shield Fern.*

Frond broad at the base, twice divided ; pinnules not differing much in size on the upper and under side of the midrib ; pinnules lobed ; lobes with three or four minute serratures ; rigid, glandular ; stem chaffy, with red scales. Supposed to be confined to limestone hills in the North of England : not recognized as a West-country Fern.

LASTREA CRISTATA. *Crested Shield Fern.*

Frond very narrow ; pinnæ short ; pinnules not notably differing in size on the upper and under side of the midrib, rarely more than six in number. Frond twice divided ; pinnules cleft ; seed large on the upper portion of the frond ; broad pale scales. Not known in Devon.

LASTREA SPINULOSA. *Spiny Shield Fern.*

Frond narrow, twice divided ; pinnules longer on the under than on the upper side of the midrib ; pinnules serrated and spiny. Stem furnished scantily with broad pale scales ; seed small, covering the frond. There is another form of *spinulosa* which is broad and dilated like *dilatata*. The root of *spinulosa* is *decumbent*. We consider *spinulosa* a difficult fern for beginners to identify, as it greatly resembles some forms of *dilatata* ; and though we

have found it in North Devon, it is certainly not common.

LASTREA DILATATA. *Broad Prickly-toothed Shield Fern.*

Fronds growing in a circle round the crown, and drooping outwards. Fronds sub-triangular or broad egg-shaped, attaining a great size ; twice or thrice divided according to its development. The pinnules of the two lower pinnae are very much larger on the lower than on the upper side of the midrib, almost twice as long. The pinnules divided to their midrib, serrated, each serrature terminating in a short spine ; scales, in the most common form, dark brown with a black centre. There is a triangular form answering the above description in all points excepting the shape of the frond ; this likewise attains a great size.

Var. *valida*.—This plant grows stiff and upright, and is of a leafy fleshy character. In some instances the pinnules and pinnae overlap one another in a remarkable manner ; the fronds in this case are usually barren. It has red-brown scales, and the serratures are not so deep, nor the spines so numerous, as in the normal form of *dilatata*. This fern was only recorded or known in Jersey till found by us at Westdown about two years ago ;

since that time we have discovered it in several different parts of Devon.

Var. *Chanteriæ* very much resembles the extreme forms of *spinulosa* in form and the narrowness of its lower pinnæ, which grow pointing upwards. It is stiff and upright in its growth ; the pinnæ far apart ; the pinnules much separated from one another and square at the end ; both the pinnæ and the apex of the frond drawn out and attenuated. The whole plant, which is of a peculiar deep green, has a light feathery appearance : it is the very reverse of *valida* and the luxuriant plants of *dilatata*. We found it in a wood at Hartland for the first time.

Var. *nana* is remarkable for its small size, rarely exceeding six inches in height. It may often be found in full seed when not more than two inches high. It is almost evergreen in Devonshire, only yielding to unusually cold winters.

Var. *fuscipes*, named by Mr. Moore in the 'Nature Prints,' is found about Ilfracombe and abounds on Dartmoor. Its foliage is very similar to that of *spinulosa* ; its scales are light brown, but narrower than those of *spinulosa*. The bottom of the stem is brown : the fronds are of a pale green and *flat*, instead of being dark in colour and concave in form, like most of the *dilatata* group.

Var. *micromera* is remarkable for its finely-cut divisions and *thick stem*. We found this in two spots within three or four miles of Ilfracombe.

Var. *deltoidea* has been named from the deltoid shape of the pinnæ, which form a very acute triangle.

Var. *dumetorum* is usually a foot or fourteen inches high, resembling *nana*, but differing in being glandular.

There are many other named varieties of *dilatata*, but as we do not know them from our own experience, it would be but copying what others have written, and not, as is the case with all the other ferns, from descriptions founded on our own observations.

LASTREA FœNISECII. *Hay-scented Fern.*

Fronds triangular, thrice divided. The pinnules on the lower side of the midrib remarkably long, especially those nearest the stem; pinnules finely cut, serrated, spiny; each serrature turned upwards, giving the whole plant a crisp and crinkly appearance; seeds very prominent and covering the under surface of the frond when the seed is mature; on the upper surface an indentation shows the position of each mass of seed. The barren fronds are more crisp than the fertile ones. The

whole plant, when dried, has a strong scent of hay. The lower part of the stem is usually dark, and the scales chestnut-coloured and scanty. There seem two varieties, one large and drooping, the other small, stiff, and upright.

CHAPTER XIII.

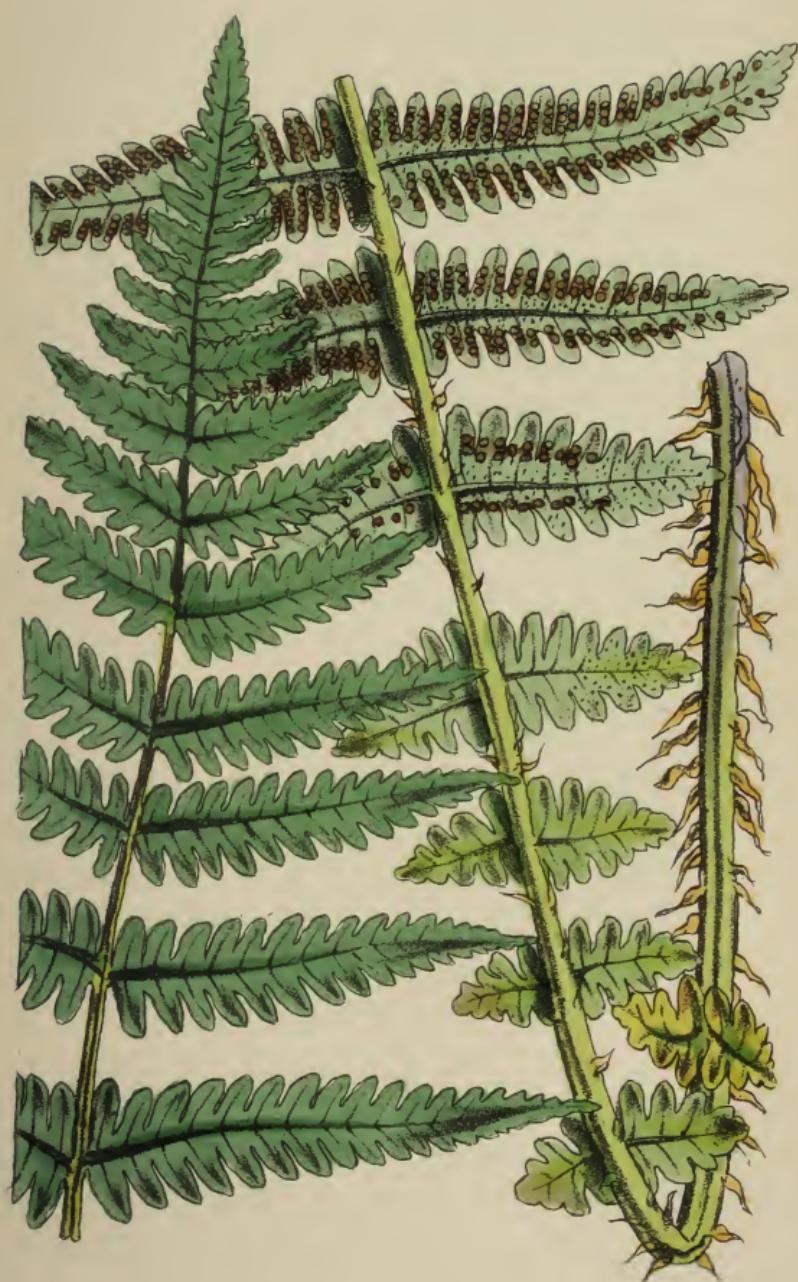
ATHYRIUM FILIX-FŒMINA. *Drooping Lady Fern.*

Fronds lance-shaped, twice divided ; pinnules distinct, deeply cleft and serrated, of the same size both above and below the midrib. Sori generally of the shape of a new moon, sometimes varying to oblong, occasionally, when they reach maturity, round and confluent.

Frond soft in texture, drooping and decaying early in the Autumn. One of our loveliest ferns, presenting great variety in its lace-like fronds ; common in all parts of the country.

Var. *molle* is broad egg-shaped, dwindling at the base ; pinnules simply toothed and cut off square, joined at their base ; sori in two lines, not crowded irregularly as in the normal form.

Var. *furcatum* is a variety of *molle*, which we found near Ilfracombe, and which Mr. Moore has named. It has the apex of the frond and of each



pinna regularly divided and crisped. It is constant in cultivation.

Var. *polyclados* has the upper part of the frond developed into a broad fan, while the rest of the frond is depauperated or irregular. A very variable variety, to be found in many places round Ilfracombe.

Var. *stenodon* is named from its remarkably fine toothed. It is of small size, the pinnules united by a narrow wing, and the rachis of a dull red.

Var. *excurrens*. "The points of the pinnæ, and sometimes of the pinnules, run out into diaphanous hair-like points, which have the appearance of being an excurrent growth of the veins."—*Moore*.

Var. *trifidum* appears to be a larger growth of *molle*. The pinnules are more distinct and lobed; lobes generally entire at the sides, and three times cleft at the points.

Var. *laxum*. "The peculiarity of this form is the very conspicuous elongation of the anterior basal lobe of the long narrow pinnules, which form a line on each side of the midrib."—*Moore*.

ATHYRIUM RHÆTIUM. *Erect Lady Fern.*

Fronds narrow, erect, twice divided; the pinnæ distant from each other; pinnules also distant, the edges of the pinnules turned under, giving the

whole plant a starved and linear appearance. The stem of this fern is very commonly of a dull purplish red. Usually found in company with *Filix-fæmina*, with which it was for many years considered identical.

Athyrium marinum is a form of the Lady Fern, very greatly resembling *A. molle*, but presenting certain differences. It was found in a sea-cave in Scotland, and is not recognized as an English plant.

ALLOSORUS CRISPUS. Parsley Fern.

(Plate V. Fig. 1.)

Fronds of two kinds, barren and fertile, triangular, thrice divided; the edges of the fertile frond doubled over the sori, giving the appearance of a *Blechnum* or *Pteris*.

A Mountain Fern, growing profusely on the drifted trapstones of Cader Idris, and found near Challacombe, Devon, by Mr. Ward.

CYSTOPTERIS FRAGILIS. Brittle Bladder Fern.

(Plate VI. Fig. 1.)

Frond lanceolate, twice divided; stem slender and brittle; sori placed near the edge of the pinnae. The peculiar characteristic of the Bladder Fern is the indusium, or covering of the seed, which is shaped like a hood or bladder.

All the species of *Cystopteris* are exceedingly fragile in their texture and variable in their form. On the same plant (when growing wild) you may find fronds which you can refer respectively to the varieties *angustata*, *dentata*, and *fragilis*; this, at least, is the opinion we have formed after seeing and comparing great numbers of wild plants. We have had the pleasure of seeing the *Cystopteris* in three native habitats. In a lonely glen in Wales, far away from the ordinary track of travellers, we found the rocks literally fringed with it.

At the Devil's Bridge, near Aberystwith, a small variety grows; and we found small plants exactly corresponding with them in great profusion on a garden-wall by the side of the high-road between Bristol and Bridgewater. These seem to be the true *dentata*, as they remain dwarf, and less divided than *fragilis* under cultivation. In Devon, *C. fragilis* is reported to grow in the immediate vicinity of Exeter, and has recently been found near Ilfracombe.

C. Dickieana is a very peculiar and striking variety. The pinnules, instead of being separate and lace-like as in the ordinary form, are blunt, broad, and tiled one over the other, so that when dried you can hardly distinguish the divisions.

C. montana is *triangular* in form, and very ele-

gant. These two latter have only as yet been found in Scotland.

HYMENOPHYLLUM UNILATERALE. *Wilson's*
Filmy Fern. (Plate IV. Fig. 2.)

The *Hymenophyllums* resemble the moss tribe much more nearly than they do other ferns (with the exception of *Trichomanes brevisetum*) in general appearance ; and instead of bearing their seed at the back of the frond, it is concealed in small cupped receptacles, which in *unilaterale* stand on short stalks between the main stem and the branches, which always turn in one direction, and the receptacles conspicuously in another. In *Hymenophyllum Tunbridgense* the receptacles are also placed between the branch and the main stem, but forms as it were a portion of the frond. These two little plants are seldom more than two or three inches high, with creeping wiry roots, which cling in moss-like patches to rocks in the neighbourhood of streams, or twine among the mosses they so much resemble at a little distance.

The frond consists of a midrib and alternate branches, which are again ramified on the upper side ; these branches are clothed with narrow pellicid wings. The most sure distinction between the two varieties is the shape of the receptacle. In

Tunbridgense it is partially embedded in the membranous portion of the frond, and the mouth is slightly jagged, whilst the frond is stiff and upright. In *unilaterale* the receptacle has a short winged footstalk; the mouth formed like the bill of a duck, not jagged. The frond is curved, and the pinnæ all turned on one side. *H. unilaterale* is common on the Plym and at Lynmouth.

ADIANTUM CAPILLUS-VENERIS. *Maiden-hair.*

(Plate II. Fig. 1.)

Fronds irregularly thrice divided; pinnules fan-shaped; with hair-like stems; the sori placed in lines along the edge of the pinnule, a portion of which turns back and forms an indusium; root creeping, about the thickness of a quill, scaly, with hairy fibres. The root greatly resembles that of the smaller and more delicate species of *Polypodium*.

One of our most local ferns, growing in rents in the cliffs where water *trickles* down. In the neighbourhood of Ilfracombe, where it is or rather was abundant, it invariably chooses those places where the water flows through or over lime rock. There are many places on the coast where the mosses that delight in moisture are gradually being transformed into stone by the dripping of these springs in which the *Maiden-hair* rejoices.

Almost all the accessible spots have been cleared of this lovely ornament, and it is now only to be obtained by those who know the intricacies of the coast, and can brave the dangers of the cliffs.

This is so peculiarly *the* fern of Devon, that one can but regret that from the carelessness and ignorance of the donkey-drivers (who sell great numbers of plants) in potting it, so many strangers should be disappointed by their being unable to preserve it for any time. It should be potted in peat and sand, kept very moist, in as equable temperature as possible, and covered with a glass.

The *Woodsias* do not occur in the south-west of England ; but for the benefit of those who have a wider range for hunting, I will note down such of their peculiarities as are known to me.

Woodsia ilvensis has a small narrow frond, once divided ; the pinnæ deeply cleft.

Woodsia hyperborea is of the same form, but the pinnæ are simply notched. The backs of the fronds are hairy or scaly, of a pale delicate green. There are decided differences besides shape between the two ferns, but I do not know them well enough to describe them.

PTERIS AQUILINA. *Common Bracken.*

Frond thrice divided ; sori line-like, under the

edge of the pinnules, which turn over it ; root extensively creeping.

The commonest of all British Ferns ; in many parts a troublesome weed. It decays before the other ferns at the first touch of Autumn, and is much used when dry for firing, and litter for pigs and cattle.

There is a very pretty small variety on Dartmoor, in which each pinna is divided two or three times at the point.

OSMUNDA REGALIS. Royal Flowering Fern.

(Plate IV. Fig. 1.)

Fronds twice divided, occasionally irregularly tripinnate. The upper part of the frond seems turned into seeds, which are arranged in little balls, at first pale yellow ; as they ripen, dark brown. The handsomest of our English Ferns. Why it is called the *flowering fern* is difficult to say, as the stiff brown termination to the frond does not certainly resemble a flower. It is stated as a curious fact that this is the only one of our present ferns that is found in a fossil state.

The *Osmunda* grows abundantly on all the streams at Hartland ; and on the banks of the Dart it attains a great size, and is found in vast quantities.

CHAPTER XIV.

PERCHANCE, during your summer trip, you have been able to visit some or all of the places I have tried to describe, and you turn once more homeward. You take a last glance from the railway carriage or the steamboat, as the case may be, of the hills among which you have been wandering. The giant cliffs fade from your view, the sea is left behind, and you sigh as you come in sight of the great city where you dwell,—miles, miles of houses, blackened trees, dingy grass, flagging shrubs in dusty squares ; and your thoughts fly back to shady lanes and overarching woods, and your heart sinks, just a little, within you.

But you are going home, at any rate. Home should ever be the dearest, happiest spot on earth, wherever it may be: and you may make even a dusty, smoky, confined London house look pretty and cheerful, with a little taste and contrivance.

You have your fern treasures gathered during

your trip ; some little addition at least to your objects of interest. Let us take out our Herbarium. We cannot boast of numbers, but each specimen is perfect of its kind, and almost as green as when they grew in their beautiful country homes. They have no flowers, it is true, but they have form.

“ But I can’t always be taking out my fern book, and I don’t see how they can make my room prettier !”

“ Not the dried leaves certainly; but do you not know that you may have living plants at very little expense ?”

You reply, “ Flowers won’t grow in town rooms : only last year I spent I know not how much on geraniums and other flowers, and they all died when the frost set in. I don’t think ferns would fare better.”

I know by experience that what you say is true as far as flowers are concerned, but you may have your pretty friends the ferns green and bright all the winter through in your sitting-room, only you must keep them from the impure air, and shield them in part from the changes of temperature to which a sitting-room is liable. If you live in a large town, you may for a couple of shillings buy a bell-glass sufficiently large to cover seven or eight pots ; in the country the glass will cost half as

much again. If you stand your plants on a round tin tray, to prevent the moisture spoiling anything on which they are placed, and cover them over with your glass, you will, at the expense of a few shillings, have a miniature greenhouse, which will give you much amusement. You should occasionally take off the glass and water the plants, being careful not to let them get too damp, as the crown is apt to decay.

This is an inexpensive "closed case." Those who have money to spare may, for thirty shillings or two pounds, have a Wardian case, in fact a miniature covered garden, for the ferns, which, instead of being in pots, are planted in the mould with which the bottom or tray is filled.

It is much more pleasant to collect one's own plants than to buy them ; and if you are provided with that indispensable requisite "a tin case," that is, an oblong tin box which closes tightly, you may take plants any distance. I have now plants of *Polypodium Dryopteris* and *Allosorus crispus* that I carried about for *three weeks*.

The best ferns for close cases are, in my opinion, those of small size. The lesser *Lastrea recurva*, and the elegant *Lastrea dilatata nana*, not above four inches high, which grows on the walls of Exmoor and near Ilfracombe ; *Asplenium Trichomanes*,

Grammitis Ceterach, and *Asplenium Ruta-muraria*, are among the common dwarf evergreen ferns suitable for indoor culture; and among the more uncommon, *Asplenium lanceolatum*, *A. viride*, *Allosorus crispus*, and the three Polypodiums, *Phegopteris*, *Dryopteris*, and *calcareum*. The *Scolopendriums* also, especially the varieties *ramosum* and *marginatum*, are extremely handsome in cultivation; but the gem of all the ferns is the Maiden-hair, which, even without a glass, in a moderately clear atmosphere, attains a size and beauty hardly to be rivalled by its foreign relations.

I have only mentioned the smaller kinds as suitable for rooms; but many others, rare and beautiful, may be readily grown by those who have a garden frame or cool greenhouse at disposal. Depend upon it, it is no waste of time to learn how to understand and enjoy anything in nature. All these beautiful forms cannot have been placed before us for no object. Perhaps in years to come, when lying weary and in suffering on an invalid's couch, we may be glad to turn to beauties we think but little of now, and may then learn their use; and when sorrow and the petty annoyances of life harass us, to turn to the pure enjoyments of nature may afford us comfort and relief.

INDEX.



		PAGE
Abbey Valley		34
Adiantum Capillus-Veneris	Plate II. Fig. 1	105
Allosorus crispus	Plate V. Fig. 1	102
Ashburton		65
Asplenium Adiantum-nigrum	Plate III. Fig. 2	84
,, ,,	var. obtusum	85
,, ,,	var. intermedium	85
,, ,,	var. acutum	85
,, ,,	var. decompositum	85
Asplenium fontanum		89
Asplenium lanceolatum	Plate III. Fig. 1	83
Asplenium marinum	Plate VI. Fig. 2	86
,, ,,	var. lobatum	86
Asplenium Ruta-muraria		88
Asplenium septentrionale	Plate III. Fig. 3	89
Asplenium Trichomanes		87
,, ,,	var. ramosum	87
,, ,,	var. lobatum	87
Asplenium viride		89
Athyrium Filix-foemina		100
,, ,,	var. molle	100
,, ,,	var. furcatum	100
,, ,,	var. polyclados	101
,, ,,	var. stenodon	101
,, ,,	var. excurrens	101
,, ,,	var. trifidum	101
,, ,,	var. laxum	101
Athyrium marinum		102
Athyrium Rhætium		101

	PAGE
Badgery Water	18
Baggy	25
Barle River	15
Barracane	25
Beckey Fall	66
Bickleigh	55
Blechnum Spicant	Plate II. Fig. 2
Braunton Burrows	74
	40
Cad Valley	53
Caddaford Bridge	51
Catherine Tor	37
Cawsand Beacon	43
Ceterach officinarum	74
Challacombe	5
Chamber Combe	23
Clovelly	Plate I.
	28
Combes of Devon	39
Combmarten	23
Cromlech	68
Culbone	17
Cystopteris dentata	103
Cystopteris Dickieana	103
Cystopteris fragilis	Plate VI. Fig. 1
	102
Cystopteris montana	103
Dartmoor	41
Darts, junction of	63
Devonshire, entrance to	9
Dewerstone	53
Dulverton	16
Dunsford Bridge	68
Exmoor	11

	PAGE
Ferns, discoveries to be made	5
Ferns, pursuit of	4
Ferns, situations of	5
Fingle's Bridge	67
Freshwater	31
Gallantry Bower	32
Gidleigh Park	68
Glenthorne	18
Hangman	22
Hartland	33
Hey Tor	65
Hobby	28
Hymenophyllum Tunbridgense	104
Hymenophyllum unilaterale	Plate IV. Fig. 2 104
Ilfracombe	24
Jump	55
Lastrea cristata	95
Lastrea dilatata	96
,, ,, var. valida	96
,, ,, var. Chanteriæ	97
,, ,, var. nana	97
,, ,, var. fuscipes	97
,, ,, var. micromera	98
,, ,, var. deltoidea	98
,, ,, var. dumetorum	98
Lastrea Fœnisecci	98
Lastrea Filix-mas	92
,, ,, var. incisa	92

	PAGE
Lastrea <i>Filix-mas</i> , var. <i>paleacea</i>	93
,, ,, var. <i>multifida</i>	93
,, ,, var. <i>cristata</i>	94
,, ,, var. <i>abbreviata</i>	94
,, ,, var. <i>pumila</i>	94
,, ,, var. <i>subintegra</i>	94
Lastrea <i>Oreopteris</i>	Plate VIII.
Lastrea <i>rigida</i>	95
Lastrea <i>spinulosa</i>	95
Lastrea <i>Thelypteris</i>	90
Lundy Island	33
Lustleigh Cleve	67
Lydford Cascade	45
Lynmouth	11
 Marsland	38
Meavy Vale	51
Milford Waterfall	46
Mole's Chamber	12
Moreton Hampstead	66
Morwell Rocks	57
Mouth Mill	33
 Oakhampton	42
Oare Water	18
Osmunda <i>regalis</i>	Plate IV. Fig. 1
	107
 Peppercombe	29
Polypodium <i>alpestre</i>	79
Polypodium <i>Dryopteris</i>	Plate VII. Fig. 1
Polypodium <i>Phegopteris</i>	Plate VII. Fig. 2
Polypodium <i>vulgare</i>	75
,, ,, var. <i>acutum</i>	75

	PAGE
<i>Polypodium vulgare</i> , var. <i>bifidum</i>	75
,, ,, var. <i>interruptum</i>	75
,, ,, var. <i>serrulatum</i>	76
,, ,, var. <i>denticulatum</i>	76
,, ,, var. <i>serratum</i>	76
,, ,, var. <i>crenatum</i>	76
,, ,, var. <i>semilacerum</i>	76
,, ,, var. <i>Cambricum</i>	76
<i>Polypodium Robertianum</i>	79
<i>Polystichum aculeatum</i>	79
,, ,, var. <i>lobatum</i>	80
,, ,, var. <i>lonchitidioides</i>	80
<i>Polystichum angulare</i>	Plate V. Fig. 2
,, ,, var. <i>hastulatum</i>	80
,, ,, var. <i>imbricatum</i>	81
,, ,, var. <i>aristatum</i>	81
,, ,, var. <i>biserratum</i>	81
,, ,, var. <i>subtripinnatum</i>	81
,, ,, var. <i>multifidum</i>	81
,, ,, var. <i>tripinnatum</i>	81
,, ,, var. <i>proliferum</i>	81
,, ,, var. <i>irregularre</i>	81
<i>Polystichum Lonchitis</i>	81
<i>Princeton</i>	50
<i>Roborough Down</i>	58
<i>Sampford Spiney</i>	59
<i>Scolopendrium vulgare</i>	70
,, ,, var. <i>ramosum</i>	71
,, ,, var. <i>digitatum</i>	71
,, ,, var. <i>marginatum</i>	71
,, ,, var. <i>multifidum</i>	71

	PAGE
<i>Scolopendrium vulgare</i> , var. <i>crenato-lobatum</i>	72
,, ,, var. <i>superlineatum</i>	72
,, ,, var. <i>obtusidentatum</i>	72
,, ,, var. <i>crispum</i>	72
,, ,, var. <i>variabile</i>	72
,, ,, var. <i>polyschides</i>	73
,, ,, var. <i>laciniatum</i>	73
Shaugh Prior	51
Simonsbath	13
Spitchweek	64
Stag Hunting	19
Stone of Death	25
 Tamar	56
Taw Marsh	43
Tor's Steps	16
Trentishoe	21
Trentishoe Barrow	22
Trichomanes <i>brevisetum</i>	104
 Valley of Rocks	20
Virtuous Lady	57
Vixen Tor	49
 Walkham	49
Watermouth	23
Widdecombe	66
Wilderness	32
Wistman's Wood	41
Withypool	14
Woodsia	106
Woolacombe	25
 Yellaries Gate	32

NEW WORKS

ON

FERNS, LICHENS, AND MOSSES.

A POPULAR HISTORY OF BRITISH FERNS

and the Allied Plants; comprising the Club Mosses, Pepper-worts, and Horsetails. By THOMAS MOORE, F.L.S., Curator of the Botanic Garden, Chelsea. *Second Edition.* 22 coloured Plates, including figures of all the species. 10s. 6d.

“Mr. Moore’s ‘Popular History of British Ferns’ forms one of the numerous elegant and instructive books by which Mr. Reeve has endeavoured to popularize the study of Natural History. In the volume before us Mr. Moore gives a clear account of the British Ferns, with directions for their cultivation, accompanied by numerous coloured plates.”—*Spectator*.

“We have rarely, if ever, seen a publication relating to plants where the object aimed at is more fully accomplished than in this elegant volume.”—*Hooker’s Journal*.

A POPULAR HISTORY OF BRITISH LICHENS;

comprising an Account of their Structure, Reproduction, Use, Distribution, and Classification. By W. LAUDER LINDSAY, M.D., Fellow of the Botanical and Royal Physical Societies of Edinburgh, etc. 22 Plates, 392 Figures. 10s. 6d. coloured.

“The first attempt to popularize a very difficult branch of botanical science. The twenty-two plates contain illustrations, beautifully coloured, of no less than 392 subjects, and it is impossible to glance over these likenesses of familiar objects, placed side by side, with elaborate illustrations of their structure and physiology, without acquiring a new interest in those humble portions of the vegetable kingdom.”—*Liverpool Courier*.

A POPULAR HISTORY OF BRITISH MOSSES;

Their Structure, Fructification, Arrangement, and General Distribution. By R. M. STARK. 20 coloured Plates. 10s. 6d.

“Mr. Stark has given as full and instructive an account of our wild Mosses as can well be desired. It is founded avowedly upon the long labours of Sir William Hooker in the same direction, and this alone guarantees the soundness of the author’s systematic views. All the genera and species of ‘Moss,’ as the term is understood by botanists, are clearly but succinctly described in the English language; and to aid the learner in understanding the subject, we find twenty coloured plates admirably executed by Mr. Fitch.”—*Gardeners’ Chronicle*.

LOVELL REEVE, 5, HENRIETTA STREET, COVENT GARDEN.

BOOKS FOR THE SEA-SIDE.

POPULAR HISTORY OF BRITISH SEAWEEDS;

Comprising all the Marine Plants of the British Isles. By the Rev. DAVID LANDSBOROUGH. *Second Edition.* 22 Plates by Fitch. 10*s.* 6*d.* coloured.

“The book is as well executed as it is well timed. The descriptions are scientific as well as popular, and the plates are clear and explicit. It is a worthy sea-side companion—a handbook for every resident on the sea-shore.”—*Economist.*

POPULAR HISTORY OF BRITISH ZOO PHYTES.

By the Rev. DR. LANDSBOROUGH. 20 Plates by Fitch. 10*s.* 6*d.* coloured.

“With this manual of Zoophytes, and that upon Seaweeds by the same author, the student can ramble along the sea-shores, and glean knowledge from every heap of tangled weed that lies in his pathway.”—*Liverpool Standard.*

POPULAR BRITISH CONCHOLOGY;

Containing a familiar History of the Mollusca and Shells inhabiting the British Isles. By G. B. SOWERBY, F.L.S. 20 Plates. 10*s.* 6*d.* coloured.

POPULAR HISTORY OF THE MOLLUSCA;

Or, Shells and their Animal Inhabitants. By MARY ROBERTS. 18 Plates by W. Wing. 10*s.* 6*d.* coloured.

“A handsome book, containing an interesting account of the formation of shells, and a popular history of the most remarkable shell-fish or land shell-animals. It will prove a nice book for the season, or for any time.”—*Spectator.*

PHYCOLOGIA BRITANNICA;

Or, the History of British Seaweeds; containing Coloured Figures and descriptions of all the species of *Algæ* inhabiting the shores of the British Islands. By WILLIAM HENRY HARVEY, M.D., M.R.I.A.,

In 3 vols. royal 8vo, arranged in order of publication £7 12 6

In 4 vols. royal 8vo, arranged systematically according

to the Synopsis £7 17 6

* * * *A few Copies have been printed on large paper.*

LOVELL REEVE, 5, HENRIETTA STREET, COVENT GARDEN.

MR. REEVE'S LIST OF PUBLICATIONS.

1.

Mrs. Chanter.

Ferny Combes;

Or, a Ramble after Ferns in the Glens and Valleys of Devonshire. By CHARLOTTE CHANTER. With 8 coloured Plates.

Fcp. 8vo, price 5s.

2.

Dr. W. Lauder Lindsay.

Popular History of British Lichens;

Comprising an Account of their Structure, Reproduction, Uses, Distribution, and Classification. By W. LAUDER LINDSAY, M.D., Fellow of the Botanical and Royal Physical Societies of Edinburgh, etc. With 22 coloured Plates, 400 Figures.

Royal 16mo, price 10s. 6d.

3.

Dr. Daubeny, F.R.S.

Popular Geography of Plants;

Or, a Botanical Excursion round the World. By E. M. C. Edited by Professor DAUBENY. With 20 tinted landscapes in chromo-lithography.

Royal 16mo, price 10s. 6d.

4.

Dr. Seemann, F.L.S.

Popular History of the Palms.

By DR. BERTHOLD SEEMANN, F.L.S. With 20 tinted landscapes in chromo-lithography.

Royal 16mo, price 10s. 6d.

5.

T. C. Archer.

A Series of Eight School Plant Diagrams,

Illustrative of 'First Steps to Economic Botany,' by T. C. ARCHER, Esq. Published for the Department of Science and Art, Marlborough House.

Price 3s. 6d. coloured, 2s. plain, per Diagram.

6.

T. C. Archer.

First Steps to Economic Botany;

A Description of the Botanical and Commercial Characters of the Chief Articles of Vegetable Origin used for Food, Clothing, Tanning, Dyeing, Building, Medicine, Perfumery, etc. For the use of Schools. By THOMAS C. ARCHER. With 20 plates. Published for the Department of Science and Art, Marlborough House.

Royal 16mo, price 2s. 6d.

"An admirable and cheap little volume, abounding in good illustrations of the plants that afford articles of food or applicable to purposes of manufacture. This should be on the table of every family, and its contents familiar with all rising minds."

ATLAS.

"As a cheap school book it is exceedingly well got up, and contains upwards of one hundred beautifully lithographed drawings, arranged on twenty plates; they represent various useful plants and their products."

GUARDIAN.

7.

T. C. Archer.

Popular Economic Botany;

Or, Description of the Botanical and Commercial Characters of the principal Articles of Vegetable Origin used for Food, Clothing, Tanning, Dyeing, Building, Medicine, Perfumery, etc. By THOMAS C. ARCHER. With 20 coloured plates.

Royal 16mo, price 10s. 6d.

"Mr. Archer's volume, we are surprised to find, is the first popular book that has been devoted exclusively to the commercial products of the Vegetable Kingdom—of that which constitutes nine-twelfths of the whole commerce in raw produce."

EXAMINER.

8.

Miss Catlow.

Popular Garden Botany;

Containing a Familiar and Technical Description of Hardy and Frame Plants, suitable for cultivation in the Garden. By AGNES CATLOW. With 20 coloured plates by W. Fitch.

Royal 16mo, price 10*s.* 6*d.*

9.

Thomas Moore, F.L.S.

Popular History of British Ferns

and the Allied Plants; comprising the Club Mosses, Pepperworts, and Horsetails. By THOMAS MOORE, F.L.S., Curator of the Botanic Garden, Chelsea. *Second Edition.* With 22 coloured plates by Fitch.

Royal 16mo, price 10*s.* 6*d.*

10.

Miss Catlow.

Popular Field Botany;

Containing a Familiar and Technical Description of the Plants most common to the British Isles, adapted to the study of either the Artificial or Natural System. By AGNES CATLOW. *Third Edition.* In twelve chapters, each being the botanical lesson for the month. With 20 coloured plates.

Royal 16mo, price 10*s.* 6*d.*

MR. REEVE'S LIST OF PUBLICATIONS.

11.

Sir W. J. Hooker, F.R.S.

Curtis's Botanical Magazine;

Comprising the Plants of the Royal Gardens of Kew, and of other Botanical Establishments in Great Britain, with suitable Descriptions. By Sir W. J. HOOKER, F.L.S., Director of the Royal Gardens of Kew. In Numbers, each containing 6 coloured plates.

Royal 8vo. Published Monthly. Price 3s. 6d.

Vols. I. to XI., price 42s. each.

12.

Sir W. J. Hooker, F.R.S.

Journal of Botany and Kew Miscellany;

Containing Original Papers by eminent Botanists, the Botanical News of the Month, Communications from Botanical Travellers, Notices of New Books, etc. Edited by Sir W. J. HOOKER, F.R.S. With plates.

In Monthly Numbers, 8vo, price 2s.

13.

Sir W. J. Hooker, F.R.S.

Icones Plantarum;

Or, Figures, with brief descriptive Characters and Remarks, of new and rare Plants, selected from the Author's Herbarium. By Sir W. J. HOOKER, F.R.S. New series, Vol. V., with 100 plates.

8vo, price 31s. 6d.

14.

Notes and Notions on Created Things.

First and Second Series. By the Author of '*Episodes of Insect Life*'. With numerous wood-engravings.

12mo, price 5s. each Series.

"We cannot imagine a book that would take a deeper hold of the imagination."

ATHENÆUM.

15.

Dr. Hooker, F.R.S.

The Rhododendrons of Sikkim-Himalaya;

Being an Account of the Rhododendrons recently discovered in the Mountains of Eastern Himalaya. By J. D. HOOKER, M.D., F.R.S. With 30 plates by W. Fitch.

Imperial folio, price £3. 16s.

16.

Dr. Hooker, F.R.S.

Illustrations of Sikkim-Himalayan Plants,

Chiefly selected from Drawings made in Sikkim under the superintendence of the late J. F. Cathcart, Esq., Bengal Civil Service. The Botanical Descriptions and Analyses by J. D. HOOKER, M.D., F.R.S. With 24 coloured plates and an illuminated title-page by FITCH.

Folio, price £5. 5s.

17.

Professor Edward Forbes, F.R.S.

Literary Papers on Scientific Subjects.

By the late Professor EDWARD FORBES, F.R.S., Selected from his Writings in the 'Literary Gazette.' With a Portrait and Memoir.

Small 8vo, price 6s.

"This reprint of reviews forms a charming book of miscellaneous essays. The criticism is genial, sensible, comprehensive, and compact. It is not common to find eminent scientific men graceful, easy, and piquant *littérateurs*; but whenever such a union of claims to public favour is manifested, it should meet with honour due. But, besides being a scientific professor, a critic, and *littérateur*, the late Edward Forbes was before all things a man—genial, sympathetic, brave and true—a thorough good fellow, as good a fellow as he was a naturalist. The reader cannot do better than possess himself of this amusing and instructive volume, if he have a liking for science without solemnity, criticism without ill-nature, and with knowledge of the subject; pleasant talk with a definite result, and a sense of the comic without the vulgar error of turning all things to a jest."

GLOBE.

18.

Sir W. J. Hooker, F.R.S.

The Victoria Regia.

By Sir W. J. HOOKER, F.R.S. With four coloured plates by Fit h.

Elephant folio, price 21s.

19.

Dr. Badham.

The Esculent Funguses of England;

Containing an Account of their Classical History, Uses, Characters, Development, Nutritious Properties, Modes of Cooking, etc. By the Rev. Dr. BADHAM. With 20 coloured plates.

Super-royal 8vo, price 21s.

20.

Dr. Landsborough, A.L.S.

Popular History of British Seaweeds;

Comprising their Structure, Fructification, Specific Characters, Arrangement, and General Distribution, with Notices of some of the Fresh-water Algae. By the Rev. D. LANDSBOROUGH, A.L.S. *Second Edition.* With 20 coloured plates by Fitch.

Royal 16mo, price 10s. 6d.

"The book is as well executed as it is well timed. The descriptions are scientific as well as popular, and the plates are clear and explicit. It is a worthy sea-side companion—a handbook for every resident on the sea-shore."

ECONOMIST.

21.

Professor Harvey, M.R.I.A.

Phycologia Britannica;

Or, History of the British Seaweeds; containing coloured Figures and Descriptions of all the Species of Algae inhabiting the Shores of the British Islands. By WILLIAM HENRY HARVEY, M.D., M.R.I.A., Keeper of the Herbarium of the University of Dublin, and Professor of Botany to the Dublin Society. With 360 plates.

In three vols. royal 8vo, arranged in the order } £7 12 6
of publication

In four vols. royal 8vo, arranged systematically } £7 17 6
according to the Synopsis

A few Copies have been printed on large paper.

"The drawings are beautifully executed by the author himself on stone, the dissections carefully prepared, and the whole account of the species drawn up in such a way as cannot fail to be instructive, even to those who are well acquainted with the subject. The greater part of our more common Algae have never been illustrated in a manner agreeable to the present state of Algology."

GABDENEES' CHRONICLE.

22.

Professor Harvey, M.R.I.A.

Nereis Australis;

Or, Illustrations of the Algae of the Southern Ocean. Being Figures and Descriptions of Marine Plants collected on the Shores of the Cape of Good Hope, the extra-tropical Australian Colonies, Tasmania, New Zealand, and the Antarctic Regions. By Professor HARVEY, M.D., M.R.I.A. Two Parts, each containing 25 coloured plates.

Imperial 8vo, price £1. 1s.

23.

J. Sanders.

Treatise on the Culture of the Vine,

As well under Glass as in the Open Air. By J. SANDERS. With 9 plates.

8vo, price 5s.

" We have examined, with no common interest, the work before us; for it will be strange indeed if a man who can act so skilfully as Mr. Sanders should be unable to offer advice of a corresponding value. We have not been disappointed. Mr. Sanders's directions are as plain as words can make them, and, we will add, as judicious as his long experience had led us to expect."

GARDENERS' CHRONICLE.

24.

Dr. Seemann, F.L.S.

Botany of the Voyage of H.M.S. Herald,

Under the command of Captain Kellett, R.N., C.B., during the Years 1845-51. By Dr. BERTHOLD SEEMANN, F.L.S. Published under the authority of the Lords Commissioners of the Admiralty. In Parts, each with 10 plates.

Royal 4to, price 10s. each Part.

~~~~~  
25.

Dr. Hooker, F.R.S.

*Flora of Tasmania.*

By JOSEPH DALTON HOOKER, M.D., F.R.S. In Parts, with 20 Plates.

Price £1. 11s. 6d. coloured; £1. 1s. plain.

~~~~~  
26.

Dr. Hooker, F.R.S.

Flora of New Zealand.

By JOSEPH DALTON HOOKER, M.D., F.R.S., etc. In 2 volumes. With 130 Plates.

Royal 4to, price £12. 12s. coloured, £8. 15s. plain.

"The work is written in good plain English, with a view to the convenience of colonists, but without on that account being rendered in the smallest degree unscientific; quite the contrary. Let us add, that the beautiful execution of the work renders it a library-book, even for those who are not interested about natural history."

GARDENERS' CHRONICLE.

~~~~~  
27.

Dr. Hooker, F.R.S.

*Flora Antarctica;*

Or, Botany of the Antarctic Voyage of H.M. Discovery Ships Erebus and Terror, in the Years 1839-43, under the command of Captain Sir J. C. Ross, F.R.S. By Dr. HOOKER, F.R.S. Published under the authority of the Lords Commissioners of the Admiralty. With 200 plates.

2 vols. royal 4to, price £10. 15s. coloured; £7. 10s. plain.

"The descriptions of the plants in this work are carefully drawn up, and much interesting matter, critical, explanatory, and historical, is added in the form of notes. The drawings of the plants are admirably executed by Mr. Fitch; and we know of no productions from his pencil, or, in fact, any botanical illustrations at all, that are superior in faithful representation and botanical correctness."

ATHENÆUM.

b

~~~~~  
28.

R. M. Stark.

A Popular History of British Mosses,

Comprising a General Account of their Structure, Fructification, Arrangement, and General Distribution. By R. M. STARK, Esq. With 20 coloured plates.

Royal 16mo, price 10s. 6d.

"Mr. Stark has given as full and instructive an account of our wild Mosses as can well be desired. It is founded avowedly upon the long labours of Sir William Hooker in the same direction, and this alone guarantees the soundness of the author's systematic views. All the genera and species of 'Moss,' as that term is understood by botanists, are clearly but succinctly described in the English language; and to aid the learner in understanding the subject, we find twenty coloured plates admirably executed by Mr. Fitch. When we add that the work has a good index, the reader will require no further assurance that it deserves to be strongly recommended."

GARDENERS' CHRONICLE.

"'Popular British Mosses' is the best book we have seen upon the subject. The plates are exquisite, and do justice to the grace and delicacy of the originals."

GUARDIAN.

~~~~~  
29.

Miss Roberts.

*Voices from the Woodlands;*

Descriptive of Forest Trees, Ferns, Mosses, and Lichens. By MARY ROBERTS. With 20 coloured plates by Fitch.

Royal 16mo, price 10s. 6d.

"The fair authoress of this pretty volume has shown more than the usual good taste of her sex in the selection of her mode of conveying to the young interesting instruction upon pleasing topics. She bids them join in a ramble through the sylvan wilds, and at her command the fragile lichen, the gnarled oak, the towering beech, the graceful chestnut, and the waving poplar, discourse eloquently, and tell their respective histories and uses."

BRITANNIA.

~~~~~  
30.

Joseph Woods, F.L.S.

The Tourist's Flora;

A Descriptive Catalogue of the Flowering Plants and Ferns of the British Islands, France, Germany, Switzerland, and Italy. By JOSEPH Woods, F.L.S. With a plate.

8vo, price 18s.

31.

Mrs. Hussey.

Illustrations of British Mycology;

Or, Figures and Descriptions of the Funguses of interest and novelty indigenous to Britain. By Mrs. HUSSEY.

Royal 4to. First Series, 90 coloured plates, price £7. 12s. 6d.;
Second Series, 50 plates, price £4. 7s. 6d.

32.

Sir W. J. Hooker, F.R.S.

A Century of Orchidaceous Plants.

The Plates selected from Curtis's Botanical Magazine. The Descriptions re-written by Sir W. J. HOOKER, F.R.S., Director of the Royal Gardens of Kew; with Introduction, and Instructions for their Culture, by JOHN CHARLES LYONS. 100 coloured plates.

Royal 4to, price £5. 5s.

"In the exquisite illustrations to this splendid volume, full justice has been rendered to the oddly formed and often brilliantly coloured flowers of this curious and interesting tribe of plants."

WESTMINSTER AND FOREIGN QUARTERLY REVIEW.

33.

Dr. Hooker, F.R.S.

Cryptogamia Antarctica;

Or, Cryptogamic Botany of the Antarctic Voyage of H.M. Ships Erebus and Terror. Issued separately. With 72 plates.

Royal 4to, price £4. 4s. coloured; £2. 17s. plain.

34.

Henry Sowerby.

Popular Mineralogy;

Comprising a familiar Account of Minerals and their Uses. By HENRY SOWERBY. With 20 coloured plates.

Royal 16mo, price 10*s.* 6*d.*

"Mr. Sowerby has endeavoured to throw around his subject every attraction. His work is fully and carefully illustrated with coloured plates." SPECTATOR.

35.

Adam White, F.L.S.

Popular History of Mammalia;

Containing a Familiar Account of their Classification and Habits. By ADAM WHITE, F.L.S., of the British Museum. With sixteen coloured plates of Quadrupeds, by B. WATERHOUSE HAWKINS, F.L.S.

Royal 16mo, price 10*s.* 6*d.*

"The present increase of our stores of anecdotal matter respecting every kind of animal has been used with much tact by Mr. White, who has a terse chatty way of putting down his reflections, mingled with easy familiarity, which every one accustomed daily to zoological pursuits is sure to attain. The book is profusely illustrated." ATLAS.

36.

Francis Walker, F.L.S., and H. T. Stainton.

Insecta Britannica;

Vols. I., II., and III., Diptera. By FRANCIS WALKER, F.L.S. With 30 plates. Vol. III., Lepidoptera: Tineina. By H. T. STAINTON. With 10 plates.

8vo, price 25*s.* each.

37.

Miss M. E. Catlow.

Popular British Entomology;

Containing a familiar and technical Description of the Insects most common to the British Isles. By MARIA E. CATLOW. *Second Edition.* In twelve chapters, each being the entomological lesson for the month. With 16 coloured plates.

Royal 16mo, price 10*s.* 6*d.*

"Judiciously executed, with excellent figures of the commoner species, for the use of young beginners." ADDRESS OF PRESIDENT OF THE ENTOMOLOGICAL SOCIETY.

"Miss Catlow's 'Popular British Entomology' contains an introductory chapter or two on classification, which are followed by brief generic and specific descriptions in English of above 200 of the commoner British species, together with accurate figures of about 70 of those described; and will be quite a treasure to any one just commencing the study of this fascinating science."

WESTMINSTER AND FOREIGN QUARTERLY REVIEW.

38.

John Curtis, F.L.S.

Curtis's British Entomology,

Being Illustrations and Descriptions of the Genera of Insects found in Great Britain and Ireland, containing coloured figures, from nature, of the most rare and beautiful species, and, in many instances, of the plants upon which they are found.

Commenced in 1824 and completed in 1840, in 193 numbers, forming 16 volumes, price £43. 16*s.* Now offered to Subscribers, new and in the best condition, with 770 coloured plates, at £21.

Re-issued also in Monthly Parts, price 3*s.* 6*d.*Vols. I. to V. of the Re-issue now ready, price 42*s.* each.

"Vous savez qu'à l'égard d'un grand nombre d'espèces, leur détermination réclame le secours de figures. Il est donc de mon devoir de vous indiquer les livres où vous trouverez les meilleures. Celui de M. Curtis, sur les genres d'insectes indigènes de l'Angleterre, me paraît avoir atteint l'*ultimatum* de la perfection."—LATREILLE.

"M. John Curtis, naturaliste Anglais, a commencé la publication d'un *Genera iconographique* des genres d'insectes et de plantes propres à la Grande Bretagne. Leurs caractères y sont représentés avec la plus grande fidélité."—CUVIER.

~~~~~  
39.

G. B. Sowerby, F.L.S.

*Popular British Conchology;*

Containing a familiar History of the Molluscs and Shells inhabiting the British Isles. By G. B. SOWERBY, F.L.S. With 20 coloured plates.

Royal 16mo, price 10s. 6d.

“Mr. G. B. Sowerby maintains the character of his father and grandfather as a naturalist, and has here produced a very instructive volume as an introduction to the study of shells. This work belongs to Mr. Reeve's illustrated series on Popular Natural History, and is a worthy companion to some of the latter volumes, of the value and interest of which we have spoken when they were published. It will be seen by the title that this work is confined to British shells. It will be found a most convenient handbook at the sea-side, as all the more common shells are not only described, but illustrated. It will serve as an admirable introduction to the great work on ‘British Mollusca,’ by the late Edward Forbes and Mr. Hanley.”

ATHENÆUM.

~~~~~  
40.

Lovell Reeve, F.L.S.

Elements of Conchology;

Comprising the Physiological History of Shells and their Molluscous Inhabitants; their Structure, Geographical Distribution, Habits, Characters, Affinities, Arrangement, and Enumeration of Species. By LOVELL REEVE, F.L.S. Parts 1 to 10, with 50 coloured plates.

Royal 8vo, price 3s. 6d. each.

“The work before us is designed to promote a more philosophical spirit of inquiry into the nature and origin of Shells.”

ECCLESIASTICAL REVIEW.

~~~~~  
41.

Lovell Reeve, F.L.S.

*Conchologia Systematica;*

Or, Complete System of Conchology; in which the Lepades and Conchiferous Mollusca are described and classified according to their Natural Organization and Habits. By LOVELL REEVE, F.L.S. Illustrated with 300 plates of upwards of 1500 figures of Shells.

Two vols. 4to, price £10 coloured.

42.

Lovell Reeve, F.L.S.

*Conchologia Iconica;*

Or, Figures and Descriptions of the Shells of Molluscous Animals, with Critical Remarks on their Synonyms, Affinities, and Circumstances of Habitation. By LOVELL REEVE, F.L.S. Published Monthly in Parts, demy 4to, each containing eight plates, price 10s.

[Part 156 just published.

## In Monographs:

|                   | £  | s. | d. |                         | £ | s. | d. |
|-------------------|----|----|----|-------------------------|---|----|----|
| ACHATINA .....    | 1  | 9  | 0  | MACTRA .....            | 1 | 6  | 6  |
| ACHATINELLA ..... | 0  | 8  | 0  | MANGELIA .....          | 0 | 10 | 6  |
| AMPHIDESMA .....  | 0  | 9  | 0  | MESALIA & EGLISIA ..... | 0 | 1  | 6  |
| ARCA .....        | 1  | 1  | 6  | MESODESMA .....         | 0 | 5  | 6  |
| ARTEMIS .....     | 0  | 13 | 0  | MITRA .....             | 2 | 10 | 0  |
| BUCCINUM .....    | 0  | 18 | 0  | MONOCEROS .....         | 0 | 5  | 6  |
| BULIMUS .....     | 5  | 12 | 0  | MUREX .....             | 2 | 5  | 6  |
| BULLIA .....      | 0  | 5  | 6  | MYADORA .....           | 0 | 1  | 6  |
| CARDITA .....     | 0  | 11 | 6  | NASSA .....             | 1 | 17 | 0  |
| CARDIUM .....     | 1  | 8  | 0  | NATICA .....            | 1 | 18 | 0  |
| CASSIDARIA .....  | 0  | 1  | 6  | NAVICELLA & LATIA ..... | 0 | 10 | 6  |
| CASSIS .....      | 0  | 15 | 6  | NERITA .....            | 1 | 4  | 6  |
| CHAMA .....       | 0  | 11 | 6  | NERITINA .....          | 2 | 7  | 0  |
| CHITON .....      | 2  | 2  | 0  | OLIVA .....             | 1 | 18 | 0  |
| CHITONELLUS ..... | 0  | 1  | 6  | ONISCIAS .....          | 0 | 1  | 6  |
| CONUS .....       | 3  | 0  | 0  | PALUDOMUS .....         | 0 | 4  | 0  |
| CORBULA .....     | 0  | 6  | 6  | PARTULA .....           | 0 | 5  | 6  |
| CRASSATELLA ..... | 0  | 4  | 0  | PATELLA .....           | 2 | 13 | 0  |
| CYPRÆA .....      | 1  | 14 | 0  | PECTEN .....            | 2 | 4  | 6  |
| CYPRICARDIA ..... | 0  | 3  | 0  | PECTUNCULUS .....       | 0 | 11 | 6  |
| DELPHINULA .....  | 0  | 6  | 6  | PHORUS .....            | 0 | 4  | 0  |
| DOLIUM .....      | 0  | 10 | 6  | PLEUROTONA .....        | 2 | 10 | 6  |
| DONAX .....       | 0  | 12 | 6  | PTEROCEA .....          | 0 | 8  | 0  |
| EBURNA .....      | 0  | 1  | 6  | PURPURA .....           | 0 | 17 | 0  |
| FASCIOLARIA ..... | 0  | 9  | 0  | PYRULA .....            | 0 | 11 | 6  |
| FICULA .....      | 0  | 1  | 6  | RANELLA .....           | 0 | 10 | 6  |
| FISSURELLA .....  | 1  | 0  | 6  | RICINULA .....          | 0 | 8  | 0  |
| FUSUS .....       | 1  | 6  | 6  | ROSTELLARIA .....       | 0 | 4  | 6  |
| GLAUCONOME .....  | 0  | 1  | 6  | SIPHONARIA .....        | 0 | 9  | 6  |
| HALIOTIS .....    | 1  | 1  | 0  | SPONDYLUS .....         | 1 | 3  | 0  |
| HARPA .....       | 0  | 5  | 6  | STROMBUS .....          | 1 | 4  | 6  |
| HELIX .....       | 13 | 5  | 0  | STRUTHIOLARIA .....     | 0 | 1  | 6  |
| HEMIPECTEN .....  | 0  | 1  | 6  | TURBINELLA .....        | 0 | 17 | 0  |
| HINNITES .....    | 0  | 1  | 6  | TRITON .....            | 1 | 5  | 6  |
| ISOCARDIA .....   | 0  | 1  | 6  | TURBO .....             | 0 | 17 | 0  |
| LUCINA .....      | 0  | 14 | 0  | TUERITELLA .....        | 0 | 14 | 6  |
| LUTRARIA .....    | 0  | 7  | 0  | VOLUTA .....            | 1 | 8  | 0  |

"This great work is intended to embrace a complete description and illustration of the shells of molluscous animals; and so far as we have seen, it is not such as to disappoint the large expectations that have been formed respecting it. The figures of the shells are all of full size: in the descriptions a careful analysis is given of the labours of others; and the author has apparently spared no pains to make the work a standard authority on the subject of which it treats."

ATHENÆUM.

43.

Miss Roberts.

*Popular History of the Mollusca;*

Comprising a Familiar Account of their Classification, Instincts, and Habits, and of the Growth and Distinguishing Characters of their Shells. By MARY ROBERTS. With 18 coloured plates by Wing.

Royal 16mo, price 10*s.* 6*d.*

44.

Adam White, F.L.S.

*Popular History of Birds.*

By ADAM WHITE, F.L.S. With 20 coloured plates.

Royal 16mo, price 10*s.* 6*d.*

45.

P. H. Gosse.

*Popular British Ornithology;*

Containing a Familiar and Technical Description of the Birds of the British Isles. By P. H. GOSSE. *Second Edition.* In twelve chapters, each being the ornithological lesson for the month. With 20 coloured plates.

Royal 16mo, price 10*s.* 6*d.*

“To render the subject of ornithology clear, and its study attractive, has been the great aim of the author of this beautiful little volume. . . . It is embellished by upwards of seventy figures of British birds beautifully coloured.”

MORNING HERALD.

46.

**Miss Catlow.***Drops of Water;*

Their marvellous and beautiful Inhabitants displayed by the Microscope.  
By AGNES CATLOW. With 4 coloured plates.

Square 12mo, price 7s. 6d.

"An elegant little book, both in the getting up and its literature. . . . The text is accompanied by coloured plates that exhibit the most remarkable creatures of the watery world."

**SPECTATOR.**

"Of the manner in which this work is executed, we can say that, like Miss Catlow's previous productions on natural history, it displays an accurate acquaintance with the subject, and a keen delight in the contemplation of the objects to which it is devoted. As far as the living beings which inhabit 'Drops of Water' are concerned, we know of no better introduction to the use of the microscope than the present volume."

**ATHENÆUM.**

47.

**Dr. Landsborough, A.L.S.***Popular History of British Zoophytes;*

By the Rev. D. LANDSBOROUGH, A.L.S., Member of the Wernerian Society of Edinburgh. With 20 coloured plates.

Royal 16mo, price 10s. 6d.

"This work constitutes one of the popular series of scientific treatises which, from the simplicity of their style, and the artistic excellence and correctness of their numerous illustrations, has acquired a celebrity beyond that of any other series of modern cheap works. With this manual of Zoophytes, and that upon Seaweeds by the same author, the student can ramble along the sea-shores and glean knowledge from every heap of tangled weed that lies in his pathway."

**LIVERPOOL STANDARD.**

48.

Dr. Thomson, F.L.S.

*Western Himalaya and Tibet;*

The Narrative of a Journey through the Mountains of Northern India, during the Years 1847 and 1848. By THOMAS THOMSON, M.D., Assistant-Surgeon, Bengal Army. With Tinted Lithographs and a Map by Arrowsmith.

8vo, price 15s.

“ Few more valuable volumes of travels than this by Dr. Thomson have been for a long time past published. Long after the interest which its novelty will create shall have passed away, it will be a standard book of reference, on account of the valuable facts which it contains, and of the spirit of sound observation in which it is written.”

ATHENÆUM.

49.

Dr. Gardner, F.L.S.

*Travels in the Interior of Brazil,*

Principally through the Northern Provinces and the Gold and Diamond Districts, during the Years 1836-41. By GEORGE GARDNER, M.D. F.L.S. *Second Edition.* With Plate and Map.

8vo, price 12s.

“ When camping out on the mountain-top or in the wilderness; roughing it in his long journey through the interior; observing the very singular mode of life there presented to his notice; describing the curious characters that fell under his observation; the arts or substitutes for arts of the people; and the natural productions of the country;—these travels are full of attraction. The book, like the country it describes, is full of new matter.”

SPECTATOR.

“ This volume is from the pen of an able naturalist, whose heart is in his occupation. . . . Some of the regions he visited have seldom been trodden by Europeans—never by Englishmen; so that his observations derive value from the novelty of the matter to which they relate.”

ATHENÆUM.

50.

A. R. Wallace.

*Travels on the Amazon and Rio Negro,*

With an Account of the Native Tribes, and Observations on the Climate, Geology, and Natural History of the Amazon Valley. By ALFRED R. WALLACE, Esq. With Remarks on the Vocabularies of Amazonian Languages, by R. G. LATHAM, M.D., F.R.S. With 6 plates and maps.

Royal 8vo, 18s.

"Mr. Wallace has given us a most lively and interesting picture of the glories of the magnificent river. Venezuela, Colombia, Ecuador, Peru, Bolivia, and Brazil, six mighty States, spreading over an area far more extensive than Europe herself, contribute their aid in forming the flood up which he toiled. For twenty-eight days consecutively he breasted the stream of the Amazon. . . . He enters, with all the zest of a naturalist, into the history of the living things which fly, run, or creep over the surface of the country. His sketches of the natives, their appearance, habits, and disposition, are quite original."

BRITANNIA.

"In the novelty of the scenery and manners, in the truthful, albeit somewhat literal, picture of what the traveller saw and felt, in the quiet earnestness by which obstacles were surmounted by Talleyrand's favourite rule of waiting, and in the patience with which sickness, suffering, and privations were submitted to, 'Travels on the Amazon and Rio Negro' remind us of the simplicity of the old voyagers."

SPECTATOR.

51.

Dr. Seemann, F.L.S.

*Circumnavigation of the Globe;*

Being the Narrative of the Voyage of H.M.S. Herald, under the command of Captain Kellett, R.N., C.B., during the Years 1845-51. By BERTHOLD SEEMANN, F.L.S., Naturalist of the Expedition. With Tinted Lithographs and a Map by Petermann.

2 vols. 8vo, price 21s.

"With extensive knowledge in geography and its cognate sciences, Mr. Seemann possesses a close and sober but vivid style, which expresses his ideas not only with clearness, but animation."

SPECTATOR.

"Mr. Seemann is always a lively and agreeable companion, and has the merit of directing the attention of the general reader to applied Natural History rather than to questions only interesting to the student of pure science."

GARDENERS' CHRONICLE.

---

52.

J. Beete Jukes, F.G.S.

*Popular Physical Geology.*

By J. BEETE JUKES, F.G.S., President of the Geological Society of Dublin. With 20 Landscape Views of Geological Scenery in Double-Tinted Lithography.

Royal 16mo, price 10s. 6d.

"Mr. Jukes's 'Popular Physical Geology' is peculiarly remarkable for the skilful treatment of his subject. The established facts and principles of Geology are not only presented with freshness, but so clearly enforced and illustrated as to impress the mind of the student, while he is stimulated to observation by the facility with which he is shown that observation can be made."

SPECTATOR.

"The illustrations to the work are of the most accurate as well as beautiful character, combining the skill of the artist with the knowledge of the geologist."

OBSERVER.

---

53.

*Dairy Farming.*

The Rearing and Feeding of Dairy Stock, and the Management of their Produce. By RURICOLA.

Crown 8vo, price 5s.

---

54.

C. H. J. Smith.

*Parks and Pleasure Grounds;*

Or, Practical Notes on Country Residences, Villas, Public Parks, and Gardens. By CHARLES H. J. SMITH, Landscape Gardener.

Crown 8vo, price 6s.

"Mr. Smith, who is a landscape gardener and garden architect of great experience, has worked out his design with ability and judgment."

GLOBE.

"The character of this publication is altogether practical, from the opening hints upon the house and offices, to the closing directions about the arboretum and the pinetum."

SPECTATOR.

55.

Sir Edward Belcher, C.B.

*The Last of the Arctic Voyages,*

During the Years 1852-4, in H.M.S. Assistance, under the command of Captain Sir E. Belcher, C.B., F.R.G.S.; with Notes on the Natural History, by Sir J. Richardson, Professor Owen, Thomas Bell, J.W. Salter, and Lovell Reeve. With 40 plates, and numerous wood-engravings.

Royal 8vo, 2 vols., price 36s.

---

56.

Chandos Wren Hoskyns.

*Talpa; or, the Chronicles of a Clay Farm.*

An Agricultural Fragment. By CHANDOS WREN HOSKYN. New and Cheaper Edition, with Frontispiece by George Cruikshank.

Fcp. 8vo, price 3s. 6d.

---

57.

Piscarius.

*The Artificial Production of Fish.*By PISCARIUS. *Third Edition.*

Price 1s.

58.

**Arthur Adams, F.L.S.***Zoology of the Voyage of H.M.S. Samarang,*

Under the command of Captain Sir Edward Belcher, C.B., F.R.A.S., during the Years 1843-46. Edited by ARTHUR ADAMS, F.L.S.

The Vertebrata, with 8 plates, by John Edward Gray, F.R.S.; the Fishes, with 10 plates, by Sir John Richardson, F.R.S.; the Mollusca with 24 plates, by Arthur Adams, F.L.S., and Lovell Reeve, F.L.S.; the Crustacea, with 13 plates, by Arthur Adams, F.L.S., and Adam White, F.L.S.

Royal 4to, price £3. 10s. coloured.

---

59.

**Sir John Richardson.***Zoology of the Voyage of H.M.S. Herald,*

Under the command of Captain Kellett, R.N., during the Years 1845-51. By Sir J. RICHARDSON. Edited by Professor Edward Forbes, F.R.S. Published under the authority of the Lords Commissioners of the Admiralty.

Part I. Fossil Mammals, 15 double plates.  
Royal 4to, 21s.

Part II. Fossil Mammals, 10 plates.  
Royal 4to, 10s. 6d.

Part III. Reptiles and Fish, 10 plates.  
Royal 4to, 10s. 6d.

~~~~~  
60.

Miss M. E. Catlow.

*Popular Scripture Zoology;*Containing a Familiar History of the Animals mentioned in the Bible.
By MARIA E. CATLOW. With 16 coloured plates.

Royal 16mo, price 10s. 6d.

"It contains a short and clear account of the animals mentioned in the Bible, classed according to their genera, and illustrated by a number of well-executed and characteristic coloured plates. It is a seasonable addition to a very nice set of books."

GUARDIAN.

"Miss Catlow's abilities as a naturalist, and her tact in popularizing any subject she undertakes, are too well known to need reiteration on this occasion."

NOTES AND QUERIES.

~~~~~  
61.

R. J. Mann.

*The Planetary and Stellar Universe.*

A Series of Lectures. By ROBERT JAMES MANN.

12mo, price 5s.

"A brief abstract of the discoveries of Newton, clearly explained and elegantly illustrated."

WESTMINSTER AND FOREIGN QUARTERLY REVIEW.

~~~~~  
62.

H. Edwards, LL.D.

Illustrations of the Wisdom and Benevolence of the Deity, as manifested in Nature. By H. EDWARDS, LL.D.

16mo, price 2s. 6d.

"A little excursion in the track of Paley and the broad road of the Bridgewater Treatises. Animals, Atmosphere, Organic Matter, Light, and Electricity are the natural elements out of which the author deduces his pious lessons, leading to a First Cause in wonder, admiration, and worship."

LITERARY GAZETTE.

PREPARING FOR PUBLICATION.

Popular History of Alpine Plants and Rockeries

By R. M. STARK.

Popular British Archaeology.

By the REV. C. BOUTELL, M.A.

Flora Tasmanica :

A History of the Plants of Van Diemen's Land; being the concluding portion of the 'Flora Antarctica.' By Dr. J. D. HOOKER, F.R.S.

[*In course of publication.*

Popular Garden Botany.

Vol. II., Greenhouse Plants. By AGNES CATLOW.

Popular History of British Fossils.

By Professor WYVILLE THOMSON.

Popular History of British Fishes.

By the REV. J. LONGMUIR.

Popular History of British Crustacea.

By ADAM WHITE, F.L.S.

Popular History of the Water Vivarium.

By G. B. SEWERBY, F.L.S.

